Alberta Advisory Council on Electricity

Report and Recommendations on Consumer Concerns

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THE ALBERTA ADVISORY COUNCIL ON ELECTRICITY

REPORT TO THE ALBERTA MINISTER OF ENERGY

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Alberta Advisory Council on Electricity

Report and Recommendations on Consumer Concerns

Executive summary

In May 2003, the Advisory Council on Electricity was asked to review and make recommendations on a number of consumer issues. In the mandate given the Council, Premier Klein stated, "I want to be clear, our government is not revisiting its decision to deregulate the electricity industry in Alberta." At the time, the Premier commented that, while deregulation has had benefits, there had been some "bumps in the road" for consumers, and their complaints need to be resolved.

This report outlines the findings of the Council on eight key issues:

- Why people in some parts of Alberta are paying higher prices
- Billing practices of utility companies
- Fairness of all line items on bills
- Consumer accessibility to competitive market options
- Long-range forecasts for consumer prices
- Current and future benefits of deregulation for consumers
- Impacts of government and Alberta Energy and Utilities Board (EUB) decisions on consumer prices
- Other consumer issues raised by the Council.

As a result of its review, the Council has developed a set of recommendations intended to help government and industry address consumer concerns.

Specifically, the Council recommends that the government develop a clear game plan for the next five years and stick to it. This would provide the kind of certainty everyone is looking for and give time for the marketplace to develop. As part of that overall game plan, steps should be taken to:

- **Expand consumer education** - Developing and implementing a comprehensive, consistent and ongoing consumer education program to inform Albertans about changes in the electricity industry that affect their bills, to help them understand how to make choices in a competitive marketplace, to explain the options they have for entering and continuing existing contracts or choosing other retailers, and to restore trust and confidence in the process.

- **Establish a consumer ombudsman** – Providing an independent, government-funded third party responsible for investigating consumer complaints and reporting regularly to Albertans. Because of his or her awareness of issues of concern to Albertans, the ombudsman could also be responsible for the proposed consumer education program.

- **Allow the market to operate** – Letting the price of electricity rise and fall as the market determines rather than intervening in ways that distort the market. If the government decides that Albertans need protection from high prices, that protection should be provided using the general revenues of the

province (e.g. through methods such as government-administered rebates) rather than through other methods that directly impact the market.

- **Improve the marketplace** – Including steps to simplify contracts, make them more user friendly for consumers, and provide a greater variety of retail contracts.

- **Continue actions to improve billing practices and customer satisfaction** – Including steps to improve accuracy and provide timely responses to customers' questions and concerns

- **Clarify roles and responsibilities** – Including setting overall policy at the provincial level, streamlining processes at the EUB, and not involving various agencies like the EUB in policy-making roles.

- **Review the impact of the flow-through Regulated Rate Tariff on an ongoing basis but no later than two years after implementation** – Reviewing the impact of the flow-through Regulated Rate Tariff on an ongoing basis to assess its impact and make refinements as necessary. The review should be based on clear criteria. Setting a timeline of two years after implementation allows companies interested in the Alberta market to plan and commit resources.

- **Consider mitigating the impact of change in some parts of the province** – Reviewing options for mitigating the costs incurred by consumers in some parts of the province who were most negatively affected by the transition to a deregulated market. If the provincial government chooses to implement any form of mitigation, it should be responsible for the costs.

- **Government to monitor progress in the retail mass market** – The retail market involving small commercial business, rural operations and residential customers is not yet functioning well. Council recommends that government continue to monitor progress in this segment of the market. Refinements in the market design, legislation and regulations may be needed from time to time.

The result of these steps should be better understanding by consumers, greater certainty in the marketplace, competitive prices, an adequate supply of electricity, fair treatment for all consumers, and a growing marketplace over the longer term.

Starting points

The restructuring of Alberta's electricity industry began in the mid-1990s. The objective was to position the industry to be increasingly cost-effective, reliable, safe, transparent and well-invested for the future. Throughout the process, the Council acknowledges that there have been difficulties and mistakes. That's not to suggest that clear benefits have not been achieved. Unfortunately, the benefits are not widely known or appreciated, nor have they resulted to this time in direct benefits to residential customers in the form of lower bills. Rightly or wrongly, Albertans expected their electricity bills to go down as a result of deregulation. Instead, they have seen increasing complexity in their bills, increased prices particularly in some parts of the province, and significant and sometimes unexplainable month-to-month variations in their electricity bills. These issues have seriously undermined confidence in the deregulation process.

In May 2003, Premier Ralph Klein asked the Advisory Council on Electricity to review and make recommendations on consumer concerns related to electricity bills. The Council was specifically asked to address the following issues:

- Why people in some parts of Alberta are paying higher prices
- Billing practices of utility companies
- Fairness of all line items on bills
- Consumer accessibility to competitive market options
- Long-range forecasts for consumer prices
- Current and future benefits of deregulation for consumers
- Impacts of government and Alberta Energy and Utilities Board (EUB) decisions on consumer prices
- Other consumer issues identified by the Council.

As part of the process of addressing these issues, the Council invited public input and set up a website for Albertans to express their views. A total of 728 responses were received, all were made available to Council for review.

The Council has completed its review of the key issues and prepared recommendations for government's consideration. It's important, though, to set the context with some important starting points.

- **People often call it "deregulation" but Alberta is really restructuring, not deregulating the entire electricity industry**.

  There are five key components of the electricity industry:
  - Generation – producing electricity in generating plants
  - Transmission – sending electricity from generating plants over high voltage transmission lines to local transformers
  - Distribution – distributing electricity over lower voltage lines to customers
  - Wholesale – dispatching electricity to meet the demand and establishing an hourly market price
  - Retail – selling electricity to a range of customers from large industrial consumers to smaller businesses and residents across the province.

  When people hear the term "deregulation" they assume this means all aspects of the industry are being deregulated. In reality, only the generation, wholesale and retail aspects of the industry are being deregulated. Deregulation of generation and development of an unregulated wholesale market are essential before a successful retail market can develop. Transmission and distribution will continue to be regulated.

- **Deregulation is a process, not an event.**

  The electricity industry is very complex. Like any major policy initiative, deregulation is a long-term project. This project has already been underway for some time (see Attachment 1). It will still take considerable time for the details to be worked out and for all aspects of the industry to operate efficiently and effectively under a new structure. The process has a considerable distance to go and likely will not be complete for several years to come. This is an important point to keep in mind when assertions are made that "deregulation doesn't work." A proper assessment of the outcomes of market reform can only be made after the new system has been in place for some time.

- **Some parts of the process have worked well while others have not.**

  The Council heard considerable frustration and anger from residential customers in particular, primarily because electricity bills have gone up. Much of the public focus has been on the problems on the consumer side and not on the progress that has been made. Deregulation of generation is complete. It is working well and has resulted in considerable investment in new electricity supply for Alberta. The wholesale market has been deregulated and, although it is well advanced and operating successfully, it is still evolving into a more mature marketplace. The retail market involving large customers is deregulated and working well. The retail market involving small commercial business, rural operations and residential customers has been partly deregulated and is not yet a well-functioning market. It is not yet clear whether this market will develop in the future, but Council recognizes that it is government policy to introduce competition for this group of customers. Council recommends that government continue to monitor progress in the development of this segment of the market. The review should also consider the longer-term nature and purpose of the Regulated Rate Tariff on an ongoing basis. Refinements in market design, legislation and regulations may be necessary from time to time to achieve the objectives of government policy.

- **Recent changes to the Electric Utilities Act, including changes in regulations for natural gas, should help markets develop.**

  The real test of the success of deregulation should be based on the twin goals of securing enough private sector investment to increase the supply of electricity to meet demands and providing a competitive marketplace that returns benefits to Albertans. Substantial progress has been made in achieving the first goal. The second goal will take more time to achieve. In the mean time, most Albertans who do not wish to select a competitive option can continue to receive retail services under a Regulated Rate Tariff. Important steps were taken this spring with changes to the Electric Utilities Act. Changes to the natural gas regulatory framework provide greater consistency in regulations for natural gas and electricity and provide expanded opportunities in the retail marketplace. As competitive markets develop, this should result in direct benefits to customers.

- **Much more needs to be done to keep Albertans well-informed and provide greater certainty about the next steps in the restructuring process.**

  One of the strongest messages from the Council involves the need for concerted, consistent and ongoing public education. Albertans are confused by their power bills. They don't understand how their bills are determined and why they change from month to month. They may support the idea of choice and a competitive marketplace, but they are not well-prepared to understand the pros and cons of various options and how to make appropriate choices. For the marketplace to work effectively, there not only needs to be choices in retail companies but consumers also need to be armed with sound information so they can make good choices. There's also a sense among many consumers that there isn't a game plan... that the various players including the provincial government are "making

this up as they go" – responding to immediate problems with short-term solutions. As discussed later in this report, the Council urges government to provide more certainty by clearly outlining the critical next steps, setting out a game plan and timelines, and sticking to it.

Within the context of those important starting points, this report provides an overall summary of the Council's findings and recommendations on each of the eight issues addressed. Further details are included in specific reports on each of the issues.

The restructuring process to date
What's working well and what isn't?

Major steps to restructure Alberta's electricity industry began in 1994 with the release of the report "Enhancing the Alberta Advantage: A comprehensive Approach to the Electricity Industry." That report was the result of extensive consultation with stakeholders in the industry. Restructuring began in 1995 with a new Electric Utilities Act that opened competition for new generation and created open access to transmission. Since that time, a number of refinements have been made, including opening up the retail market. The most recent changes were made in the spring of 2003 in order to make changes in the industry structure, level the playing field between privately-owned and municipally-owned utilities, and align electricity and natural gas policy to help the market develop. Highlights of the various steps taken to date are included in Attachment 1 to this report, Industry Structure Change Timeline.

Deregulation is a process and a learning experience that takes time. As the process has evolved, some aspects have worked well while others have not.

What is working well?

- **Alberta has a more reliable supply of electricity**. As a result of deregulation, private sector companies and Epcor have added nearly 3,000 megawatts of electricity to the province. This has provided a more reliable supply of electricity.

- **New supply was added by private sector companies rather than by government**. Instead of the provincial government having to invest in new power generation, private sector companies (in addition to municipally-owned companies like EPCOR) made the investment and increased the supply of electricity in the province. The shareholders in those companies are responsible for the risk involved in their investment. In provinces such as Ontario, Manitoba and Quebec, much of the cost of adding new generation is born by the province and becomes a substantial burden on their provincial debt and on all taxpayers. In Ontario, for example, the long-term debt of crown-owned electric utilities is $34.5 billion – the equivalent of $2,875 for every person in Ontario. In Manitoba, the debt load is equivalent to $6,342 per person and in Quebec; it amounts to $4,822 per person. In Alberta, there is no public debt associated with electricity assets.

- **New electricity capacity is more environmentally friendly**. The new generation additions are replacing older, less efficient generation plants. Much of the new power capacity comes from more energy-efficient gas-fired technology or from cogeneration. Changes in technology are also improving coal-fired generation. In addition, Alberta also has a growing renewable energy industry, with increasing electricity coming from wind, biomass, and small hydro.

- **Retail competition is fierce in the large commercial and industrial market**. Because this component involves a small number of customers that buy large amounts of electricity, this market has naturally developed more quickly than the mass market.

- **The wholesale power market is working well**. Added supply is putting downward pressure on average wholesale market prices and large consumers of electricity in the province have become more responsive to price signals from the Alberta Electric System Operator (formerly known as the Power Pool of Alberta).

- **Amendments made to legislation in June 2003 are designed to refine and develop the marketplace for the benefit of consumers and retailers**. These changes were the result of widespread consultation and an assessment of the experiences to date with deregulation and represent a positive step in enhancing the design of the retail mass market.

What isn't working as well?

- **Mass market customer bills have increased**. Information reviewed by the Council suggests that prices would have gone up with or without deregulation, primarily because the price of natural gas has increased substantially and that has a direct impact on the price of electricity. In addition, new generation capacity would have been required to meet the demands and new power generation plants were required to meet more stringent environmental requirements that also add to the cost. Nonetheless, Albertans expected their bills to go down, and instead, they've gone up. Customers are frustrated and angry. They're angry at government because they believe a promise has not been kept. And they've lost trust in utility companies because of what they interpret as price gouging and billing inaccuracies.

- **Consumer education about how the electricity industry works and the factors that affect their bills has been intermittent at best.** Neither the provincial government nor the industry participants have provided sufficient comprehensive, ongoing and consistent consumer education to help Albertans respond to the changes in the marketplace. Consumer research indicates that most mass market customers do not understand the changes in the industry, the line items on their bills, or the options that are available to them.

- **The process has resulted in a great deal of customer frustration.** Government responded to customers' concerns by providing significant new powers to the Market Surveillance Administrator, putting more teeth in the Code of Conduct Regulation, and introducing a new requirement for ENMAX and EPCOR to be regulated by the EUB rather than their municipal owners.

- **A number of billing and load settlement problems arose.** Consumers were not pleased with receiving inaccurate bills and pointed the finger at the provincial government, blaming the problem on deregulation. The government responded by introducing a penalty system for retailers that did not provide accurate bills.

- **On some occasions, the provincial government introduced changes in regulations and legislation without stakeholder consultation and on very short notice.** An example is the 2001 price cap on regulated rates. As a consequence of a market-driven spike in electricity prices in 2000, the government became concerned about consumers' ability to pay significantly higher bills and decided to mitigate the impact of the price spike by spreading it over future years in the form of rate riders. On the one hand, the government offered protection from a short-term phenomenon that would have otherwise been a more drastic burden on consumers. On the other hand, it meant that the problem was prolonged over several years. It simply is not efficient for consumers to purchase electricity on a lay-away plan where they consume now and pay later. In effect, the government ended up delaying the benefits to consumers that would have come from the growing generation capacity brought about by deregulation. It added to their confusion and also increased uncertainty in the market. It was seen by some consumers and investors as evidence that the deregulated market was not stable or working well and that the government did not have faith in market reforms.

- **New components have been added to consumers' bills.** While consumers used to receive a bill with a single rate from their utility company, they now receive bills with specific components identified

such as rate riders, transmission and distribution rates, administration charges, local access fees, and GST. Some of these components are not new (such as administration charges, local access fees, and GST) but the splitting of electricity costs from transmission and distribution charges was a major change. These "unbundled" bills provide a more complete picture of the total bill people pay, but they are confusing to many consumers, especially since people didn't realize they were paying these costs before deregulation. On the other hand, the visibility of these various costs is introducing competitive pressures and causing retailers to reduce their costs or risk losing customers.

These concerns were certainly echoed by those who expressed their views to the Council as part of the consultation process. In general, the most common concerns focused on:

- **Increased prices**. People expected prices to go down and instead, they've gone up. In some cases, prices have increased substantially and people with lower incomes or who live on fixed incomes are worried about how they will be able to afford it.

- **Billing inaccuracies and unexplained changes from month to month**. People identified substantial changes in monthly charges even though their consumption had not changed. In some cases, people regularly monitored their own meter readings and this did not match the readings on their bills.

- **Lack of understanding of the various components of their bills**. People's bills have become more complex and they have concerns about each component. In many cases, people said their bills for the actual electricity consumed had not gone up but all the other components had. Rate riders are of particular concern. Many people saw that as retroactive billing, something that other businesses could not do. They also questioned why they had to keep paying for transmission and distribution when the power poles and wires must have been paid for long ago.

- **A sense of powerlessness**. Many people complained about the lack of an adequate response when they tried to find out why their bills had gone up or to correct inaccuracies. Customers have, at times, been disappointed with the quality and timeliness of responses to their legitimate questions.

- **Lack of confidence in deregulation**. Because of the problems many people encountered, they concluded that deregulation is a failure. There is a sense that, because Alberta has abundant natural resources, especially natural gas, people should see the benefits. They should not have to pay higher prices for electricity than people in other provinces, and the reason they do is, in their view, because of deregulation.

Addressing the eight issues

The following sections provide highlights of the Council's key findings and conclusions for each of the eight issues included in this review. More detailed information is included in separate papers on each of the issues in the Appendices.

Issue 1 Why some people in some parts of Alberta pay higher prices

A key question for customers in some parts of the province is "why are we paying more?" The Council found a number of reasons why rates vary across the province.

Infrastructure costs are different.

- The costs of distributing power are different in different parts of the province. It costs more to distribute power to customers in rural Alberta than it does in a densely populated city. That's because the distances are greater and there are fewer people served. These differences are not new and existed prior to deregulation.

There are differences in ownership, regulation and costs.

- Distribution systems have different owners. Some are owned by investor-owned utilities. Some are owned by municipalities (EPCOR and ENMAX), and others are not-for-profit co-ops. Because of their different ownership, they have different regulations, they pay different taxes, they charge different fees, and they have different costs for borrowing money to build and maintain their infrastructure. The result is different costs and different charges for customers. This also is a historical factor and is not due to deregulation.

Energy costs vary across the province.

- Each owner of distribution wires in the province is required to provide energy to residential, farm, irrigation, and small commercial and industrial customers through a tariff formerly known as the Regulated Rate Option (RRO). With new legislation and regulations that came into force in June 2003, the RRO has been renamed the Regulated Rate Tariff.

- In the case of companies like ATCO Electric and Aquila, the EUB approves the RRO. Municipal councils approve the RROs for companies like EPCOR and ENMAX. And the Boards of co-ops approve their RROs.

- The companies involved use different strategies for acquiring the energy supply and, as a result, they have different costs. These factors are reflected in the RROs that have been approved and result in people paying different amounts depending on who provides their electricity.

- By January 2004, the Regulated Rate Tariff for residential and small commercial customers will be based on the hourly price of electricity provided from the Alberta Electric System Operator (AESO). A similar requirement for farms, residential and irrigation customers will be in place by January 2006. In the ATCO Electric service area, the transition to an AESO flow-through price has already been implemented and ATCO Electric no longer supplies electricity to its customers at a fixed price.

- Once implemented, the AESO flow-through price Regulated Rate Tariff will reduce or eliminate the current disparities in regulated electricity prices across the province. Those customers that want a fixed price for electricity have the option of entering into a fixed-price contract with a retailer.

Rate riders vary for different parts of the province.

- In 2001, when electricity prices were increasing, the provincial government capped the charge for electricity at 11 cents per kilowatt hour regardless of how much the RRO provider had paid for it. This meant that, in 2002, some customers got a rate rider credit (if their provider paid less than the maximum charge) while others got an additional rate rider charge (if their provider paid more than the maximum charge).

- Most of the current rate riders will be eliminated by the end of 2003 and this should significantly reduce customers' electricity bills.

Rates can be different depending on whether customers pay the RRO or a contract price.

- Since January 2001, customers have had the option of signing a contract with unregulated retail entities, however, the option has not been available to all customers because of the lack of retailers and retail products.

- Just like a mortgage, the rates people pay can vary. In the case of electricity, customers can pay different amounts depending on how much electricity they require, the price they are able to negotiate, the period of the contract, and when the contract was negotiated.

What is broken with the current arrangements?

While customers are understandably concerned about paying more in some parts of the province, the Council found that there are a number of legitimate reasons for the variations. All the various providers have provided a Regulated Rate Tariff that is consistent with existing legislation and regulations.

The biggest concern and source of confusion for customers stems from the rate riders. The fact that customers are paying today for the costs of decisions made several years ago is a serious problem. There are few other purchases a customer can make where he or she has to pay a retroactive charge. Different billing practices in different parts of the province have made the confusion even greater. Because bills are more complex than in the past, it is almost impossible for customers to compare today's bills with the ones they had in the past. All of this has undermined customers' confidence and it will take a concerted effort by everyone in the industry and by government to regain it.

What should be done to fix it?

The transition to the AESO flow-through pricing reflected in the Regulated Rate Tariff will eliminate the need for future rate riders and provide greater consistency. At the same time, the price of electricity will continue to be volatile, because of changes in the price of natural gas and the way in which electricity is purchased and distributed. As more retail choices are available, customers will be able to choose a fixed-price option that suits their individual needs or stay on the Regulated Rate Tariff.

If the goal of an expanding retail marketplace is achieved, it will result in a greater range of choices for customers. Because of differences in various factors that determine the costs, it is not reasonable to expect that people all across the province will pay the same price. If prices spike upwards and government decides Albertans need protection from higher prices, it should only intervene in ways that do not distort

the market. That would include options that use the general revenues of the province to cushion prices for consumers such as government-administered rebates.

Issue 2 Billing practices of utility companies

Before 2001, customers were used to receiving a bill from their utility company that included all aspects of providing electricity. It came as a single charge with all the costs combined, and it was simple for customers to understand.

After 2001, the billing system changed. Instead of getting a simple bill from their utility company, customers now receive a bill from their retailer and the bill breaks down the costs of each of the various components.

The change was intended to allow retailers to develop and market electricity products and to provide customers with better information about the costs of various components of their electricity bill. But the result has been considerable confusion for customers primarily because of multiple levels of charges, new items like rate riders, and several billing periods on the same bill. The confusion has been compounded because insufficient information was given to consumers about these changes.

What is broken with the current arrangements?

Though recent strides have been made in this area, it is fair to say that the transition from the old billing approach to the new one has been difficult and serious problems have occurred. In particular, the Council found that:

- Some distribution companies have had trouble providing retailers with timely and accurate information about how much electricity customers use.

- Keeping an accurate database of customer information has been difficult and has resulted in a number of billing errors and inconsistencies. Examples include inconsistencies in billing for rate riders, different billing periods for different services, and inconsistent billing for energy consumption and wires charges.

- In some cases, there hasn't been good communication between the local distribution company and the retailer so changes in customers' requirements have not been addressed.

- Different local distribution companies read meters on different schedules. Meter readings are used to estimate hourly consumption which then sets the bill for consumers. Recent regulatory and commercial changes affecting the way meter readings are collected and processed should help address customers' concerns.

- A number of concerns were raised with billing accuracy and, as a result, regulations were put in place to require corrections and compensation to consumers if bills were incorrect and they were over-charged. Out of the approximately 2.8 million bills issued in the EPCOR-Aquila service area between December 2002 and July 2003, 1,936 disputes were reviewed by the EUB and 60% of the completed assessments (1,120) resulted in a $75 credit to the customer. It should also be noted that 55% of the credits were for underbilling issues, not overbilling. It is important to note that billing inaccuracies do not explain why people in some parts of Alberta may be paying higher prices for electricity than others.

- Customers have expressed serious concerns with the way their inquiries or complaints are handled by retailers and local distribution companies. Many customers are not satisfied with the answers they get and have no ability to take their concerns to the next level of management in the company.

What should be done to fix it?

Considerable time and effort has been invested in trying to fix the billing problems. A comparison of billing disputes over time shows that the number of monthly calls to the EUB has decreased from 1,664 in December 2002 to 91 in August 2003. Recent commercial and regulatory changes to standardize how retailers update their databases and to increase how often customers' meters are read should help considerably.

The overall objective for the industry must be to create a billing environment that reduces customer concerns about the accuracy of their bills. They should be held accountable through a system of effective rules and penalties if they do not properly fulfill their respective roles in providing billing information.

Unfortunately, because the retailer is the key point of contact for customers, they end up receiving customer complaints about issues the retailer is unable to address. Despite good efforts to redirect calls in a timely matter, it's clear that the process hasn't always worked effectively. Utilities also receive calls from customers that they are unable to address including concerns with prices and with the entire deregulation process.

The Council believes that the current approach to meter reading, load settlement, billing, and responses to customer inquiries can be successful – but only if additional effort is made to educate customers and if all industry participants are held accountable for achieving improved customer satisfaction.

Issue 3 Fairness of line items on utility bills

Utility bills clearly are the flashpoint for customer concerns about electricity deregulation. As noted earlier, one of the key sources of confusion for customers is the increased complexity and the number of line items on their bills. Customer bills now have separate lines for:

- Electric energy charge – covering the cost of electricity the consumer used
- Distribution charges – covering the cost of delivering electricity from substations to homes and businesses
- Transmission charges – covering the cost of transporting electricity over high voltage lines from the place where it is generated to substations across the province
- Local access or franchise fees – charged by municipalities to utility companies operating in their area
- Administration charge – a monthly flat fee to cover the costs of customer service, billing, and marketing
- Rate riders – additional charges utilities are allowed to charge to recoup their costs when the regulated rates were capped. Credits also can be provided if costs are lower than the regulated rates.
- GST.

Because of the number of changes going on at the same time, each component of a customer's bill has gone through a number of fluctuations. The result is confusion by customers and questions about the fairness of line items on their bills.

What is broken with the current arrangements?

The Council has reviewed electric utility bills and concludes that the line items on the bills are fair and reasonable and most in fact are regulated.

However, we also understand consumers' concerns. As noted earlier, Albertans expected prices to go down as a result of deregulation and it hasn't happened. Some also argue that prices are higher than they would have been if the province hadn't deregulated the electricity industry. One study was recently done to estimate what wholesale prices might have been had deregulation continued. The study was commissioned by the Independent Power Producers Society of Alberta. While the Council is not in a position to endorse the study, that study confirms the view of many that Alberta's electricity prices would have risen to meet growing demands and concludes that Alberta's market prices are converging with rates that would have been seen in a regulated market.

In addition, as noted earlier, the new bills are confusing and most customers do not understand each line item on their bill, let alone why the costs for each item go up and down. Some consumers blame deregulation for increasing bills even though only a portion of the bill is tied to restructuring of the industry. The kind of comprehensive consumer education that is necessary to inform Albertans about changes in their bills has not been done either by industry or by government.

What should be done?

The onus of demonstrating fairness of all line items on customers' bills should rest with the company that sends the bill and receives the payments. In most cases, this will be the retailers.

Both government and industry players must provide more and better information to consumers so they can understand what their bills mean and why the prices change.

Because of lingering questions about what the prices would have been if the electricity industry had not been deregulated, an independent and credible assessment of prices over the long-term under a regulated vs. a deregulated market would be helpful.

Issue 4 Consumer accessibility to competitive market options

The electricity market continues to evolve. For large commercial and industrial consumers, there is a highly competitive market. But there are fewer options for residential and small commercial customers and the market has been slower to develop. For a number of reasons, residential customers were reluctant to move from their current provider to a new retailer or to a competitive contract. Retailers were slow to come into the market or to offer competitive options because the costs and risks of serving these consumers were much higher. Alberta's market for electricity is also relatively small and somewhat isolated from a larger western market. Alberta's location, combined with some infrastructure issues, makes it difficult for Alberta to import and export large volumes of electricity. These factors make it difficult to attract a large number of competitive retailers. EPCOR recently decided to get out of the retail competitive contract business for residential, farm and small commercial customers. At the same time, another company is expected to enter the marketplace this fall.

What's broken with the current arrangements?

Several factors have led people to think they don't have access to competitive market options.

- Most Albertans aren't aware of the high level of competition in the large commercial and industrial market. Because of the high volumes involved, it's more attractive for companies to go after this market first. While greater competition in the large commercial and industrial market can indirectly result in benefits for all consumers (e.g. potentially lower consumer prices for goods and services produced in this market), it likely has meant slower progress in developing a competitive market for residential and small commercial customers.

- Some retailers don't find the market for residential and small commercial customers to be particularly attractive. Costs are high and volumes are relatively low. They need to invest in large-scale billing and customer service operations while there are continuing pressures for costs to go down. They also need to advertise and market their services, and this adds to their costs. It's also more likely for government to intervene in this marketplace if prices go up and consumers are unhappy.

- Residential and small commercial customers have been reluctant to change from their current company's regulated rate to another retailer or another competitive offer. There is a serious lack of information and no neutral body to turn to when customers have concerns. For a number of reasons, there is a general sense of mistrust because of the complexity of the industry and the problems that have occurred throughout the deregulation process.

- The current provincial requirements have led to long, uninviting and hard-to-understand contracts. Combined with that, most retailers currently offer only three- and five-year contract terms while one company (ENMAX) offers a one-year bundled electricity and natural gas contract. Shorter-term contracts and additional options for consumers would encourage more residential and small commercial customers to sign fixed-price contracts. Exiting contracts also need to be more user-friendly and more reasonable for the consumer. Consumers also need information about the implications and options for continuing with existing contracts or choosing packages offered by other retailers.

- There is an underlying notion that the government of Alberta may re-regulate the industry or at least provide rebates or price caps. Rebates and price caps create problems for retailers because they discourage consumers from looking at options in the marketplace.

What should be done?

The recent changes to the Electric Utilities Act and associated regulations, combined with another strong retailer coming into the market this fall, should address many of the issues, help build a more competitive marketplace, and provide customers with greater choice.

Several additional steps should be taken.

- Contracts should be standardized, simplified and made more user friendly.

- Retailers should recognize the importance of providing shorter-term contract offers and additional options for consumers.

- Lower cost contracting practices that make expanded use of technology, such as Internet-based marketing and voice signature, should be explored.

- Government should consider options for mitigating the costs incurred by consumers in some parts of the province who were most negatively affected by the transition to a deregulated market. Government should be responsible for the costs of any form of mitigation.

- Application of the Payment in Lieu of Income Tax (PILOT) treatment to regulated rate tariffs provided by municipally-owned utilities should be considered.

- The role and mandate of the Alberta Energy and Utilities Board, Alberta Energy, the Market Surveillance Administrator, and other key parties in promoting choice and value for electricity consumers should be reviewed.

- Outstanding, relevant recommendations developed by the Retail Information Management Committee in 2002 should be implemented.

Issue 5 Long range forecast for consumer prices

Given the time available to prepare this report, the Council was not able to provide a useful forecast of consumer prices.

Forecasting prices is a difficult art, especially when the industry is in the midst of major changes. Electricity prices are variable and are increasing everywhere primarily because the fuel costs for generating electricity are increasing, new and more costly environmental measures are being applied, and considerable investment is needed to add new capacity and update existing facilities.

The Council believes that a properly done price forecast that fully describes the various considerations that must be taken into account would be a useful exercise, primarily to increase our understanding of the various factors, old and new, that influence price in this changing industry.

Issue 6 Current and future benefits of deregulation for consumers

As noted earlier in this report, there have been some important gains made as a result of deregulation but there also have been some difficulties to deal with. On the positive side, primarily investor-owned companies have added nearly 3,000 megawatts of more efficient electricity supply. Taxpayers and consumers are no longer burdened with guaranteeing recovery of the cost of utilities adding more supply. The wholesale market is becoming more competitive and responsive. The new supply available in the market is expected to put downward pressure on wholesale costs and this should be passed on to consumers in the form of lower bills. The competitive market is forcing retailers to lower their costs for billing and administration. Retail competition is well developed in the large commercial and industrial market.

On the other hand, the residential and small commercial customer market has been slower to develop and numerous problems have caused frustration and undermined consumers' confidence. Consumers in all markets are increasingly exercising their right to choose a retailer and a competitive contract and recent changes in the retail market structure should help expand the retail market. However, to date in Alberta, only about 3.5% of those in the mass market have chosen the option of a contract.

As noted earlier, it is not yet clear whether the market for residential, farm and small commercial customers will develop in the future. Government should continue to monitor progress on an ongoing basis. Further refinements in market design, legislation and regulations may be necessary to provide the necessary consumer protection and to achieve government's objective of a competitive marketplace for this segment of customers.

What is broken with the current arrangements?

Consumers' understanding of deregulation and what they can expect to happen as a result is minimal. We now know that it was unrealistic to expect prices to go down. On top of that, many consumers do not understand what changes are being made and why. They don't understand their bills, and they don't have the information they need to make choices among different competitive offers.

In addition to consumers' concerns, the government of Alberta has not always been successful in providing timely and accurate information about market principles and policies. This ad hoc approach has created uncertainty for both consumers and participants in the electricity industry.

The transition to customer choice in 2001 had a negative impact on some customers, through no fault of their own. These customers didn't understand how the transition would affect them. There were few, if any, contracts available and few residential and small commercial customers have opted for competitive offerings. The regulated rate option should have provided some stability, but the impact of other factors including rate riders offset many of the benefits of a regulated rate.

What should be done?

The deregulation process is still in its early stages. As rate riders disappear, the market stabilizes, utilities fix the billing problems, and consumer understanding increases, the benefits of a deregulated electricity industry should become more evident to consumers.

In addition to the specific actions outlined in other sections of this report, the Council feels that two essential steps should be taken to ensure that Albertans see the benefits of deregulation over the longer term:

- An independent, government-funded consumer ombudsman should be established to investigate consumer concerns and complaints and report regularly on the outcomes of those investigations
- A comprehensive, consistent and ongoing program of consumer education should be launched to inform Albertans about key changes in the industry and help them make good choices in the marketplace.

Issue 7 Impact of Government and Alberta Energy and Utilities Board decisions on consumer prices

Under the current system:

- The provincial government is responsible for overall policy, industry structure and market framework
- The Alberta Energy and Utilities Board is responsible for regulating costs and rates and setting reasonable terms and conditions for service

- The Alberta Electric System Operator is responsible for overseeing the operation of the market and communicating the market price for electric energy.

Those three groups are responsible for addressing issues involving the key features of how the electricity industry operates. In the Council's view, issues related to the supply of electricity, how electricity is supplied to customers, and questions about service should be left to the market and the companies involved in the market to resolve.

What's broken with the current arrangements?

Several concerns have been identified.

- The ongoing threat of potential government intervention in the marketplace creates uncertainty for investors, market participants, and consumers. Since 1995, the government has been accused of interfering in the operation of the market. Some of this criticism is warranted while some is not. Nevertheless, it is clear that intervention slows or prevents market development and successful deregulation. The rules of the game must be clear and stay the same for a reasonable amount of time to provide certainty and allow companies to make business decisions.

- Public and consumer education is sorely lacking and there is a level of mistrust and fear that has prevented many customers from participating in a competitive marketplace.

- The Alberta Energy and Utilities Board and other independent agencies such as the Alberta Electric System Operator should not be used to make policy decisions. This has increased the cost of hearings and caused delays in the decision-making process. Too many policy-related issues are being brought to the EUB and too many organizations are looking to the EUB for decisions on these types of issues. In effect, the EUB has been challenged to take on the role of "deregulator" in addition to regulator. As a result, there is confusion over the role of the EUB.

What should be done?

The government and regulators must maintain a long-term approach to policy and avoid making short-term decisions that delay the longer-term benefits of a deregulated marketplace.

The Government of Alberta has a critical role to play in ensuring policy stability in the electricity marketplace. If electricity prices increase and become a serious concern, the government should not intervene in ways that distort the development of the marketplace and hinder the development of long-term benefits to consumers as a result of deregulation. While various methods of government intervention may have similar short-term results for the consumer, they can have significantly different impacts on the industry and on the longer-term benefits of deregulation for consumers. If government decides to protect consumers from the impact of higher prices, it should use the general revenues of the province to do so.

The government should also clarify roles and responsibilities and provide more independence to the agencies responsible for various aspects of the electricity industry. This would get rid of costly overlap and duplication and improve accountability.

Policy regarding the electricity industry should, to the extent possible, be contained in legislation, and regulations should be used sparingly. Stakeholders should be involved before any new regulations are developed and, as noted above, agencies like the EUB, the AESO and the MSA should not be used to set policy.

A comprehensive communications and consumer education program should be implemented to help consumers understand the marketplace and regain their confidence.

In terms of the EUB, there should be a clear distinction between policy development and the rate-making role of the EUB. Steps should be taken continue the work underway by the EUB to streamline hearing timelines and reduce costs, enhance the process for gathering customer input on rates, and establish performance measures with the aim of improving timelines and reducing costs.

In order to help build a more competitive marketplace, the government should work with neighbouring provinces and US states to plan and develop a more integrated North American energy marketplace.

Issue 8 Other consumer issues raised by the Council

The majority, if not all, of consumers' concerns are related to the seven previous issues and have been addressed through the Council's review of those issues.

Improving the way forward

There is little doubt that the problems to date have seriously undermined Albertans' confidence in deregulation. Although, as noted earlier in this report, there have been positive results and some parts of the process are working very well, the benefits have often been overshadowed by concerns with electricity prices and billing problems.

Electricity consumers generally want bills to be as low as possible. They want reliable power, friendly and efficient customer service, and fair and accurate bills.

Those involved in the electricity industry want greater certainty in the process. They want roles and responsibilities to be clear. They want the marketplace to be allowed to work without continuing fear of government intervention.

In the Council's view, the way to meet both sets of expectations – from consumers and from the electricity industry – is to set out a clear game plan for the next five years and stick to it. This would provide the kind of certainty everyone is looking for and give time for the marketplace to develop.

As part of the game plan, the Council urges government to take steps to implement the various actions recommended in this report. First priority should be placed on:

- **Expanding consumer education** - Developing and implementing a comprehensive, consistent and ongoing consumer education program to inform Albertans about changes in the electricity industry that affect their bills, to help them understand how to make choices in a competitive marketplace, to explain the options they have for entering and continuing contracts or choosing other retailers, and to restore trust and confidence in the process.

- **Establishing a consumer ombudsman** – Providing an independent, government-funded third party responsible for investigating consumer complaints and reporting regularly to Albertans. Because of his or her awareness of issues of concern to Albertans, the ombudsman could also be responsible for the proposed consumer education program.

- **Allowing the market to operate** – Letting the price of electricity rise and fall as the market determines rather than intervening in ways that distort the market. If the government decides that Albertans need protection from high prices, that protection should be provided using the general revenues of the province (e.g. through methods such as government-administered rebates) rather than through other methods that directly impact the market.

- **Improving the marketplace** – Including steps to simplify contracts, make them more user friendly for consumers, and provide a greater variety of retail contracts.

- **Continuing actions to improve billing practices and customer satisfaction** – Including steps to improve accuracy and provide timely responses to customers' questions and concerns.

- **Reviewing the impact of the flow-through Regulated Rate Tariff on an ongoing basis but no later than two years after implementation** – To assess its impact and make refinements as necessary. The review should be based on clear criteria. Setting a timeline of two years after implementation allows companies interested in the Alberta market to plan and commit resources.

- **Mitigating the impact of change in some parts of the province** – Reviewing options for mitigating the costs incurred by consumers in some parts of the province who were most negatively affected by the transition to a deregulated market. If the provincial government chooses to implement any form of mitigation, it should be responsible for the costs.

- **Preparing a forecast of the future price of electricity** – Undertaking a comprehensive exercise to examine the various factors that affect the price of electricity and preparing a forecast of future prices.

- **Undertaking an independent study of electricity prices with and without deregulation** – Recognizing ongoing concerns with the impact of deregulation on Alberta's electricity prices and engaging a credible, independent source to provide an assessment.

- **Clarifying roles and responsibilities** – Including setting overall policy at the provincial level, streamlining processes at the EUB, and not involving various agencies like the EUB in policy-making roles.

With these actions in place and a clear game plan, the Council believes Albertans will begin to see some very important benefits.

- **Better understanding**. With better consumer education, Albertans should understand what their bills mean, what they are being charged for, and why. Better understanding will also help consumers to know how to negotiate an electricity contract and understand they have options for renewing their existing contracts or choosing packages offered by other retailers.

- **More certainty**. With a clear plan in place, there will be more certainty for both consumers and participants in the electricity industry.

- **Competitive prices**. While there are no guarantees that prices will go down, Albertans have every reason to expect competitive prices, especially once the current rate riders expire.

- **Adequate supply of electricity**. We've already seen that one of the key benefits of deregulation has been increased supply. Unlike other provinces where the only way they can increase supply is to invest substantial provincial resources and incur large debts, in Alberta, the costs and risks of increasing supply will continue to be the responsibility of private sector companies.

- **Fair treatment**. Improvements in billing practices combined with a provincial consumer ombudsman should result in fair treatment and an independent review when consumers can't get their problems addressed.

- **Growing marketplace**. While the market for residential and small commercial customers has been slow to develop, there are some positive signs, especially with a new retail company set to begin operation this fall. On the other hand, this will take time and Albertans should not expect a lot of competition in the short term. In the mean time, the Regulated Rate Tariff will continue to be in place.

Attachment 1

Industry structure change timeline

- October 1994 - Alberta Energy released for comment the report "Enhancing the Alberta Advantage: A Comprehensive Approach to the Electric Industry". This report was the product of a multi-stakeholder Steering Committee established by the Minister of Energy following four years of discussions in various forums about Alberta's electric system. The two broad goals of the government's review process were to find a replacement for the controversial EEMA mechanism of averaging provincial transmission and generation costs, and also to introduce more competition into the industry through structural and regulatory reforms.

    - These included a Task Force in 1990, a series of workshops in 1991, public hearings in 1992 and formal discussions among stakeholders throughout 1993 and early 1994.

- December 1994 - the government announced that based on reaction to the October report, it will create legislation in spring 1995 to implement the recommendations of the report, with full implementation to occur January 1, 1996.

- Spring 1995 Legislative session - the Electric Utilities Act was introduced. The EUA provided for the following changes in the industry: (essentially, two new entities were created in order to create competition in generation. This was the start of deregulation in generation)

    - Open competition for new generation – an open access Power Pool was created, through which all generation (utility and independent) is bought and sold. New generation projects no longer required regulatory approval for timing and tariffs, but were guided instead by market forces. The costs of existing utility generation continued to be regulated and averaged among all customers.

    - Open-access Transmission – a new entity, the Transmission Administrator, was created to establish the rules and tariffs for open-access non-discriminatory access to the provincial grid. The costs of transmission continued to be regulated and averaged among all customers.

- Spring 1998 Legislative session – the Electric Utilities Amendment Act was introduced, after continued consultation with industry stakeholders, in order to move along the transition of the industry and to fill in some of the details that were left out of the 1995 EUA. The focus of the changes was to complete the deregulation of existing generation (new generation was already unregulated according to the 1995 EUA), and to move to full retail competition. The following were the major provisions:

    - Beginning in 2001, long-term power purchase arrangements (PPAs) replace the EUB regulation of existing (pre-EUA) utility generation. The PPAs will be auctioned in 2000 and the proceeds will be returned to consumers. Holders of the PPAs will participate in the unregulated wholesale market.

    - Beginning in 2001, retail competition (customer choice) will be available to all consumers. A Regulated Rate Option (RRO) is to be provided by distribution utilities for a period of 5 years for residential and farm customers and 3 years for small industrial and business customers. Thereafter, unregulated retailers are to serve the entire market. Codes of conduct are established to ensure fair competition with distribution-affiliated retailers, and payments in lieu of income tax are provided for to ensure fair competition with government-owned retailers.

- In the interest of fairness, the governance of the Power Pool was changed to be independent of industry participants. A new entity, the Market Surveillance Administrator (MSA), was also created to monitor the effectiveness of the wholesale market.

- Spring 2003 Legislative Session – a revised Electric Utilities Act and amendments to the Gas Utilities Act were introduced as refinements in aid of the ongoing transition in both the electricity and natural gas marketplaces. Extensive consultation occurred throughout 2001 and 2002, including with the Advisory Council on Electricity. The major objectives of these pieces of legislation were:

  - Structural changes were made to increase the independence and responsiveness of the governing entities (a new Independent System Operator comprising the Power Pool, Transmission Administrator, and Load Settlement functions; separation of the Balancing Pool; the MSA to report to the EUB, with expanded responsibilities for the retail market).

  - Regulatory changes were made to address fair competition concerns (the RRO and distribution tariffs of municipally-owned utilities are to be subject to EUB approval rather than to City Council if the municipal utility has affiliates that operate outside their boundaries; Medicine Hat's energy trades are to be subject to a payment in lieu of income tax).

  - The RRO will not end in 2003 and 2005 but will be replaced by a new pool price flow-through rate.

  - Changes were made to natural gas legislation to better align it with electricity such that retail markets for both products may be strengthened.

- Transmission Development Policy - In August, Alberta Energy released their Transmission Development Policy Paper and has invited comments. This will be followed up shortly by a new Regulation to provide policy guidance to the EUB and the ISO in matters concerning transmission. The need for transmission policy at this time is a reflection of the critical role of transmission infrastructure in today's competitive and restructured electricity industry.

  The goal of the transmission policy is "to ensure that consumers are served with reliable, reasonably priced electricity, and to support continued economic growth in Alberta". (ref. Transmission Development Policy paper, section 2.1). In order to achieve this goal, the policy emphasizes that adequate transmission must be in place to support new generation development. Policy guidance is needed in several areas, including proactive and open planning processes, appropriate cost allocation of existing and new transmission, import/export capabilities, interactions with external markets, and dedicated export projects.

Appendices

Appendix A - Issue #1

Why some parts of Alberta are paying higher prices than other areas

Executive summary

Different distribution costs in different areas of the province lead to differences in the cost of providing the distribution (delivery) service to electric customers. However, these costs are closely regulated, as is appropriate for natural monopolies, and customers pay only the prudently incurred costs of the distribution service they receive.

Providers of the Regulated Rate Option in different areas of the province have pursued different approaches to providing the Regulated Rate Option (RRO). While the various approaches were each consistent with applicable legislation and regulation, and were approved by the applicable regulatory authorities, the different approaches resulted in different rates for different areas of the province. The approaches differ mainly by setting a fixed RRO price for a period or setting an RRO price that varies with market prices within the period. Regulatory decisions affecting the price of energy in 2000, and the government's decision in late 2000 to cap the RRO at 11¢/kWh in 2001 created significant energy cost deferral accounts, which are currently being collected from customers through energy rate riders. All of these cost remain regulated, the rate riders will end in 2004, and the existing RRO will change to the new Regulated Rate Tariff based on a consistent electricity price across the province by the end of 2005. under the new act. It should be noted however that there still be variations in the bills across the province because of differences in distribution costs noted above.

Recommendations

- Several factors contribute to price differences in different parts of Alberta. These include:
  - Infrastructure differences in electric distribution systems, such a customer density.
  - Ownership differences in electric distribution systems.
  - Regulatory differences in the regulation of electric distribution systems.
  - Wide differences in the franchise fees assessed by different municipalities.

  All of these factors are real cost differences, and all are regulated by various agencies in the province. These charges all existed before deregulation and the fact that these cost differences do not result from deregulation must be made clear to the public in the consumer education program.

- Differences in energy rate riders due to deferral accounts which were created in 2000, and the government's decision to cap the 2001 RRO at 11 cents/kWh are currently causing different areas of the province to pay different rates The Council notes that most of these riders will be eliminated by the end of 2003, and all of them will be eliminated by the end of 2004.

- Different approaches to the RRO by RRO providers for the remainder of 2003 (for commercial and small industrial customers still on the RRO) and until the end of 2005 (for residential, farm, and

irrigation customers) will continue to result in different rates for the RRO in different areas of the province.

- After 2003 (for commercial and small industrial customers) and after 2005 (for residential, farm, and irrigation customers), current legislation proclaimed in June 2003 will result in similar Regulated Rate Tariffs for all customers in the province who elect to be supplied under this tariff. The term Regulated Rate Tariff is used to denote the successor rate to the RRO, as provided for in the new EUA.

- The Council notes that the Regulated Rate Tariff in the EUA does not have a time limit and could go on indefinitely. The Council recommends that the government provides through regulation for a review of this provision of the Act after a period of two years to determine if conditions exist to allow elimination of this remaining regulatory obstacle to a fully competitive retail market.

- Continued development of the non-regulated retail market will allow customers to choose different electricity products from different retailers, resulting in different customers paying different prices, depending on their choices. The Council believes this will be a positive development.

1. Background

1.1. Introduction

The price Albertans pay for electricity is made up of several components (See Question 3 for an outline of these components). Customers pay for the energy they consume (produced by generating plants located throughout the province), the high voltage wires that move energy around the province from the sources of generation to the load centres (transmission system), and the low-voltage wires that deliver the energy to their place of consumption (distribution system).

1.2. Infrastructure Differences

Transmission costs across the province are averaged so that regardless of where a customer consumes their energy in the province, similar consumption will attract similar transmission charges. This is commonly referred to as a 'postage stamp' approach.

Distribution costs are also averaged, but only within the areas supplied by each local distribution company. Each local distribution system supplies specific areas of the province (service areas), and the costs of providing distribution vary in different areas. For instance the cost of providing distribution to rural Alberta is higher than the cost of providing distribution in a densely populated municipality. The different ages of distribution facilities and depreciation methods also result in rate differences. Therefore, customers in different parts of Alberta who have similar consumption may not pay similar distribution charges. This situation has existed for most of the history of distribution of electricity in Alberta, and is not perceived by the Council as a problem.

1.3. Ownership, Regulatory and Other Differences

Distribution systems in Alberta are owned by investor-owned utilities, municipally-owned utilities, and non-profit co-ops. The different types of owners have different costs of providing service due to their tax status, their access to capital, and the way in which they are regulated.

Investor-owned distribution utilities are regulated by the Alberta Energy and Utilities Board (EUB). The EUB regulates the cost of providing the wires service by allowing the appropriate rates to be set in a way

which ensures, on a forecast basis, that the distribution company receives enough revenue to build, operate, and maintain its distribution system. The investor-owned utilities are allowed to fund part of their capital requirements (the cost of building new facilities) with shareowner equity, and the Board determines how much shareowner equity can be used, and the fair return to pay shareowners for the use of equity. Investor owned utilities pay federal and provincial taxes on the return portion of their cost of service.

Municipally-owned distribution utilities are currently mostly regulated by their municipal councils,[1] who have adopted various methods of setting rates, and the rates are not necessarily based on their utility's cost of providing the service. For instance, EPCOR's distribution rates in the City of Edmonton have been subject to a performance-based regulation tariff, which provides incentives for cost and process efficiencies by the utility, while reducing the administrative costs of the regulatory process. Municipally owned distribution utilities also do not pay federal or provincial taxes on the income they earn.

Co-ops are regulated by their Boards of Directors. Their Boards use various methods for setting rates, and are operated in such a way that the co-ops do not earn a profit because they serve only their members who are their shareholders. Because they don't earn a profit, they pay no tax.

All three structures described above have to borrow money to fund the portion of their capital spending which is not funded by equity. All three structures have access to different debt structures, which may result in different costs of borrowing.

The Municipal Government Act gives municipalities the ability to charge a franchise fee (known by different names in some areas) and to collect the franchise fee through the bills issued by utilities. These franchise fees are set independently by civic governments, and subsequently approved by the Alberta Energy and Utilities Board. However, there is no requirement that these fees be consistent across the province, leading to differences in rates.

The Council notes that these differences in ownership, regulation, tax, access to capital, and franchise fees have existed for most of the history of the electric distribution system in Alberta and they are clearly not the result of deregulation. The Council also notes that the major municipally-owned distribution systems of EPCOR and ENMAX will be regulated by the EUB effective January 1, 2004. However, differences in rates resulting from differences in ownership, regulation, and taxes have been addressed by the government in the past, and may be addressed by the government in the future.

1.4. Different Energy Costs

Each owner of distribution wires in the province is required to provide energy to residential, farm, irrigation, and small commercial and industrial customers through a tariff known as the Regulated Rate Option (RRO). This tariff is currently approved by the EUB in the ATCO Electric and Aquila service areas, municipal councils in service areas served by municipally-owned distribution companies, and the Board of co-ops in the co-op owned distribution areas. ATCO Electric provides the RRO to most customers in the ATCO Electric service area (the exception being some REA customers). EPCOR provides the RRO to customers in Edmonton and also to most customers in the Aquila Service Area. ENMAX provides the RRO to customers in Calgary. Other municipally owned distribution companies, and some REAs have made arrangements with third-parties, including ATCO, EPCOR, ENMAX and other suppliers, to provide their RRO.

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1 EPCOR's transmission wires are currently regulated by the EUB. Recent changes to the Electric Utilities Act will result in EPCOR and ENMAX distribution wires being regulated by the EUB as long as EPCOR and ENMAX continue to own competitive retail affiliates.

Regulators have approved different types of RRO for the different RRO providers, and as a result, customers are paying different amounts for the RRO.

The major difference in the rates reflects the approaches taken by the different RRO providers. ATCO Electric has EUB approval to buy all of the energy for RRO customers in 2003 from the Power Pool of Alberta at the hourly spot market price, and passes this cost through to customers. EPCOR has responsibility for providing the RRO in the Aquila service area and chose a different approach. EPCOR received approval from the EUB for an RRO which was negotiated with representatives of the customers EPCOR serves. They agreed on (and the Board subsequently approved) an RRO which involved pre-purchasing the majority of energy that RRO customers would need at fixed prices, which in turn allows provision of stable energy charges for customers. ENMAX's approach is somewhat in between the above two methodologies – approximately 80% of the energy provided to customers is fixed in price for the entire year. The remainder is provided at the spot price. Along with approval of their proposed approaches to providing the RRO, providers have also sought regulator approval of return margins or other fees that would compensate them for the value of the service provided and/or for the underlying risks. EPCOR in Edmonton provides the RRO at a price approved by Edmonton City Council. ENMAX in Calgary provides the RRO at a price approved by Calgary's Electric Utility Review Committee.

The major difference in the current approaches to setting the RRO is the approach to acquiring the energy; pool price flow-through, or hedged.

Comparing these two different approaches illustrates why customers pay different amounts for energy. Assume that one RRO provider pre-bought all of the energy required by their RRO customers at 7¢/kWh. Regardless of the pool spot market price, this RRO provider would charge their RRO customers 7¢/kWh for all energy consumed. By hedging, this approach stabilizes the price, however hedging costs are incurred. On the other hand, another RRO provider would charge their RRO customers the actual spot market price for the energy consumed. If the spot market price was less than 7¢/kWh, customers of this second RRO provider would be paying less than the first example. If the spot market price was higher than 7¢/kWh, customers of this second RRO provider would be paying more. Because the spot market price varies from hour to hour, this comparison will change on an hourly basis.

Neither of these approaches is better than the other, they simply represent different ways of managing the risk of pool price variations. However, the consequence of the approach is that from time to time, customers of different RRO providers will be paying different prices for energy, depending on the manner in which the RRO provider has procured energy. The difficulty for many customers has been that they were unable or did not choose to make this decision individually on January 1, 2001 and as a consequence became locked into an the RRO rate provided by their RRO provider, and its associated features. Different rates in different areas of the province resulting from different approaches to the RRO may be problematic. Different rates in different areas of the province resulting from customers exercising individual choice in selecting retail electric products (when and where these are available) are not a problem.

For commercial and small industrial customers currently on the RRO, government legislation proclaimed in June of 2003 requires that on January 1, 2004 the RRO must change to a Regulated Rate Tariff which is a flow through of the Power Pool of Alberta hourly price (the term Regulated Rate Tariff is used to denote the successor rate to the RRO, as provided for in the new EUA). Similarly, for farm, residential, and irrigation customers, the RRO must change to flow through the Power Pool of Alberta hourly price on January 1, 2006. The legislated requirement for a single Regulated Rate Tariff design across the province will reduce or eliminate the current disparity in RRO prices across the province.

The Council considered whether the current design of the RRO meets the needs of customers, while minimizing the likelihood of different prices in different areas of the province. The Council concluded that it is beyond the Council's mandate to recommend any changes to current government policy on the RRO.

The Council notes that the Regulated Default Supply Regulation in the Electric Utilities Act of 2003 will prevent a fully competitive and deregulated retail market from developing in the province for an indefinite period of time.

The Council recognizes that the mass market (small commercial and residential) is the last segment of this market to develop, and in fact this segment is still at an early stage of development. There is a general feeling in the Council that these market segments have not yet been adequately prepared to participate in a deregulated electricity market. The Council therefore accepts that a regulated rate tariff may be needed for this market segment for some period of time after the existing Regulated Rate Option is eliminated on January 1, 2004 and January 1, 2006. However the Council is very concerned that leaving the regulated rate tariff in place for an indefinite period of time will constrain the development of a fully competitive mass retail market and could affect the attractiveness of the market to some retailers. It believes that the new regulated default rate and an effective consumer education program will provide sufficient motivation and information to enable these customers to choose contract offers, and should permit the Government of Alberta to fully deregulate the retail market in a reasonable and specified period of time.

Therefore the Council recommends that the government provide through regulation for a review of the regulated rate tariff provisions of the Act and the Regulation after a period of two years to determine if conditions exist that would allow the elimination of this remaining regulatory obstacle to a fully competitive retail market. This review should be conducted with consideration of factors such as:

- The implementation of a consumer education program, and evaluation of its effectiveness;
- Consumer acceptance of the market as it has developed by that time;
- The further development of the wholesale market; and
- The regulatory costs created by the existing regulations.

1.5. Energy Rate Riders

There are two ways to deal with the possibility that the cost of energy procured by an RRO provider will be greater than or less than the price the RRO provider is allowed to charge customers by its regulator. The first approach is to place this risk on the RRO provider. If the RRO provider is able to purchase energy at a price lower than the RRO rate it is allowed to charge customers, the extra profit goes to the RRO provider. Conversely, if the RRO provider pays more for energy than he collects from customers, the RRO provider would incur the loss.

The second approach is to adjust the price that customers pay for their RRO energy once the actual costs of providing the energy is known. This type of adjustment occurs after the fact, and is usually collected or refunded to customers through an energy rate rider. Rate riders are not allowed unless the appropriate regulator has approved them.

A unique example of the need for an energy rate rider occurred in 2001. The provincial government capped the charge for electric energy under the RRO at 11¢/kWh, regardless of the cost incurred to provide the RRO. The provincial government also (through regulations) authorized the EUB to approve the collection from, or refund to, customers for the difference between 11¢/kWh and the actual price paid for energy by the RRO provider, through a subsequent energy rate rider. In 2002, this led to some

customers getting a rate rider credit, and some other customers getting a rate rider charge. This difference affected customer rates in 2002, which contributed to different rates in different areas of the province.

The pool price flow through product mandated under the new Electric Utilities Act will require ongoing 'true-ups' on customer bills to reconcile variances relating to the load settlement process. These true-ups are expected to be small, and these true-ups will be different in nature than the energy rate riders that were necessitated by the 11c/kWh price cap.

It is expected that the existing energy rate riders, which are currently impacting customer bills will be mostly eliminated by the end of 2003, the remainder in 2004, which should significantly reduce customer concerns about the source of such riders, and confusion over the impact the riders have on the magnitude of customer bills.

1.6. Billing Issues

Although billing issues are not specifically related to differences in prices paid by customers, most customers have difficulty separating different billing practices from different prices.

The Council notes that recent changes to the manner in which meter readings are collected and processed have recently been enacted by the Alberta Electric System Operator. The Council agrees that billing issues need to be addressed, but does not see them as contributing to the issues to be addressed as part of this question.

1.7. Non Regulated Retail Energy Products

Since January 1, 2001, customers have had the option of signing a contract with electricity retailers for their electricity requirements, although this option wasn't available to all customers due to a lack of retailers and/or retail products for those customers. These products are not regulated. Customers with different load requirements, different negotiating skills, different periods of contract, and different dates of transfer to these products receive different prices for their electricity. This is very similar to what happens with mortgages. The Council sees this as the normal development of a retail market, and does not express concern with the different prices Albertans will end up paying as a result of the ability to exercise choice.

2. What is broken?

Putting aside the fact that energy prices increased significantly in the latter parts of 2000 and early 2001, there can be no question that customers have been confused by the proliferation of energy rate riders and the differences in RRO prices that have existed since 2001. The fact that customers are paying today some of the costs of decisions, consumption and actions that occurred three years ago is by no means optimal. This past approach has ensured that there are discrepancies between service territories and between individual customers. There are few other purchases where the customer is subject to retroactive charges or credits, based on the costs incurred by the supplier. Different billing practices in different areas of the province have exacerbated the perception of these problems.

Different RRO designs by different RRO providers continue to cause confusion and uncertainty among customers, but these differences will be eliminated under the provisions of the new EUA.

Bill comparisons which customers make with older bills, prior to the introduction of wholesale competition for generation, and retail competition for customers are difficult, given the different bill

formats and different degrees of unbundling of historically integrated rates that have occurred through the transition to full deregulation.

To regain the confidence of these consumers is going to take a concerted effort by all players in this industry.

3. Will it work?

For the wires, yes. The regulatory model for the "wires" has existed in Alberta for many years, and will continue to deliver safe, reliable, and fairly priced delivery charges for all customers in the province. Where those charges are different in different areas of the province, sound reasons will dictate those differences. The Council expects that the government will continue to monitor the differences in distribution rates across the province to ensure that they remain fair and reasonable.

The legislative and regulatory model for the Regulated Rate Tariff will eliminate the need for future energy riders, since the Regulated Rate Tariff provider will pass on his costs of acquiring energy for customers from the Power Pool. The fact that all Regulated Rate Tariff providers will supply customers on a flow-through rate ensures consistency. At that time, energy rate riders as we have come to know them, will be eliminated.

If government sees the current differences in energy rate riders being paid by different customers as adverse to the public interest, there are solutions which can be considered, although resolving this issue will require funding the current outstanding deferral accounts.

If government sees the current differences in RRO approaches used by different RRO providers as adverse to the public interest, the government can require standard approaches to providing the RRO, by providing a policy statement, and requiring the RRO regulators to approve similar RROs for all areas of the province.

4. What are the potential traps?

The flow through Regulated Rate Tariff will be volatile, changing as the Power Pool of Alberta Pool price changes from time to time. There may be a temptation for the government to introduce some stability and predictability into this rate, rather than allowing the market to respond, or to possibly impose price 'caps.'

The Council strongly recommends against price caps.

5. Other consumer issues arising.

The Government of Alberta has adopted a clear policy of encouraging retailers to provide electricity products which meet the unique requirements of individual customers, in the expectation that competition among retailers will result in more efficient delivery of these product options to customers than could be achieved in a regulated retail electricity market. As retail choices become available to customers, and customers make choices in selecting from the options available, customers will end up paying different prices. This is a natural evolution of the market, and is not to be discouraged. However there is a serious need for consumer education so that consumers can learn how to make those choices.

Appendix B - Issue #2

Billing practices of utility companies

Executive summary

There have been problems with electric bills, primarily as a result of the move to the billing model which has retailers sending bills directly to customers. The council concludes that appropriate attention is being paid to these issues, and expects that recent changes to billing regulations will cause continued improvement of the process.

Customer confusion due to multiple levels of charges, deferral payments and at least three billing periods on most bills until recently has resulted in significant additional dissatisfaction and misunderstanding. Recent changes by utilities have reduced some of this confusion by moving to fewer billing periods, however deferral account payments continue to result in customer dissatisfaction.

Recommendations

- Although improvements have started, this area will continue to require diligence from all industry participants. The industry objective must be to create a billing environment which reduces customer concern about the accuracy of their bills.

- Load Settlement continues to be an issue. The Alberta Electric System Operator has lead responsibility to ensure that load settlement occurs properly, and has recently taken steps to improve the overall quality of load settlement.

- Many customers do not yet understand the different roles of the retailer and the local distribution company. Additional education for customers is required, and each of the parties involved in customer inquiries must be held accountable for providing the correct information, or re-directing calls in an appropriate manner.

1. Background

1.1. Introduction

On January 1, 2001 the Alberta electrical utility industry implemented a major change in billing procedures for electricity.

Prior to 2001, electric utilities were responsible for all aspects of billing for electricity. The bill that was provided to customers included all aspects of providing electricity, including generation, transmission, distribution, franchise and other fees, GST, and the utility administrative costs of providing billing and other customer care services.

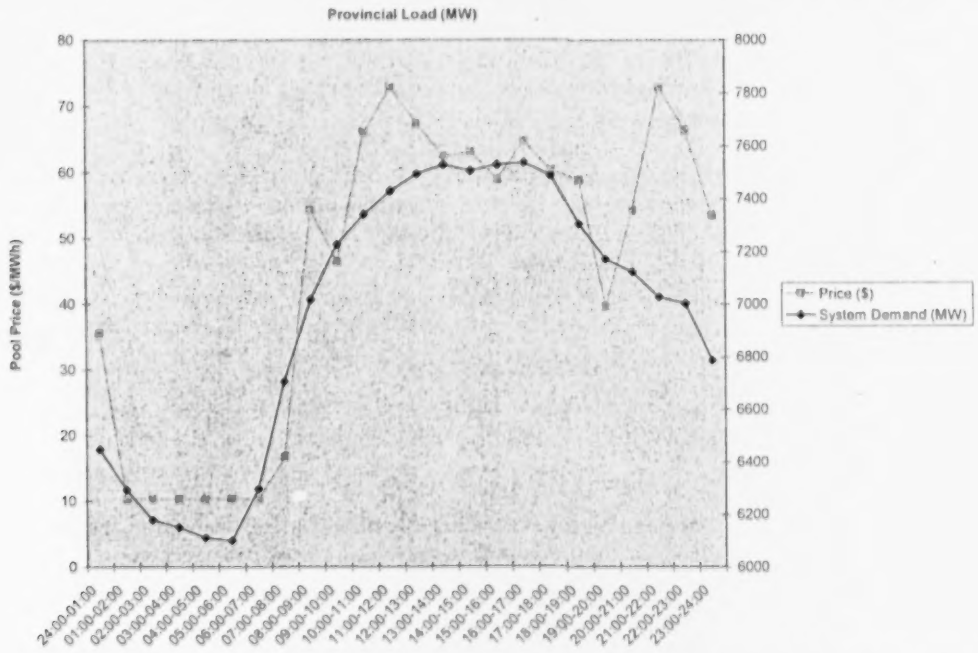
Starting in 2001, the industry moved to the "retailer one-bill" model. With this model, the local distribution company removed all charges related to generation and retail billing and customer care from its bill, and began sending the bill to the customer's retailer, rather than directly to the customer. The retailer then added on the cost of energy provided to the customer, as well as the retailer's billing and other customer care services, and created the final bill to the customer. This approach allowed retailers to develop and market electricity energy products which are attractive to individual customers or groups, rather than being restricted to the "one size fits all" approach previously used by the regulated utilities

1.2. The Load Settlement Challenge

With the exception of electric energy which customers generate for their own consumption and energy consumed in the City of Medicine Hat, all electric energy consumed in Alberta is supplied through the Power Pool of Alberta. With the exceptions noted above, the Power Pool is the clearinghouse for all energy bought and sold in Alberta, and is the market through which retailers acquire the physical energy to supply their customers. The Power Pool sets the price of electricity on an hourly basis, and the price changes significantly from hour to hour.

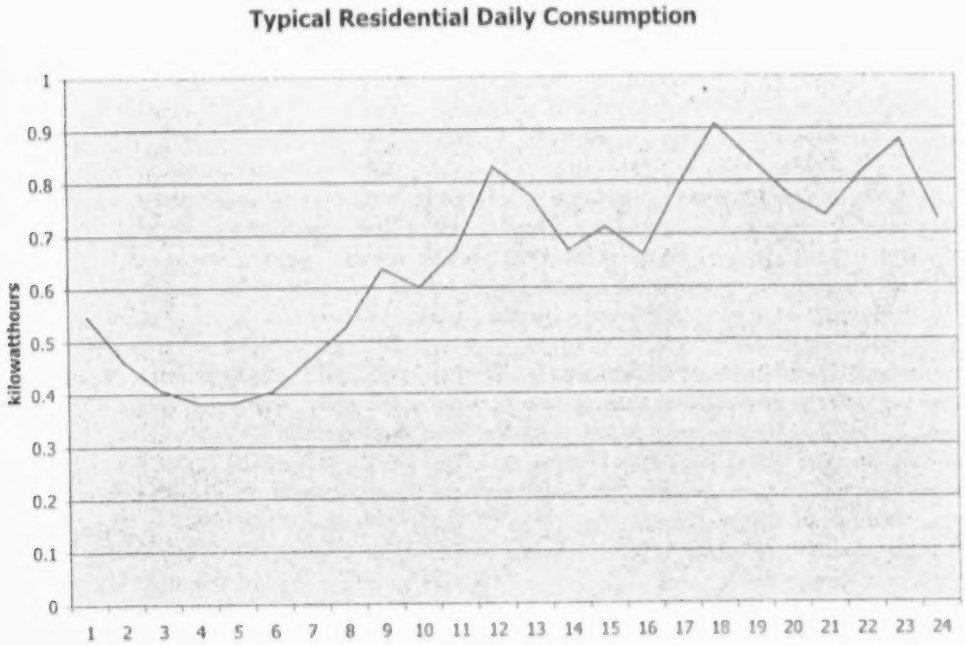
With the exception of large customers, in particular industrial sites, electric energy consumption in Alberta is measured on a cumulative basis, not an hourly basis. Each time a meter is read by a distribution company or its agent, the consumption that occurred since the last meter reading can be determined, but the meter provides no clues as to the pattern of consumption which occurred between the meter readings. The following graph of actual measurements illustrating typical hourly demand and price demonstrates how much the provincial load (in MegaWatts or MW) and Pool Price (in dollars/MegaWatthour or $/MWh) can vary during a single day.

As can be seen from the graph, energy consumption in the province varies significantly on an hourly basis, and this is a result of how customers consume energy. During periods of low consumption, the least expensive generation in the province is providing electricity, and the pool price is usually quite low.



However, as the load increases during the day, more expensive generation has to be brought into service to supply the increased load, and the pool price increases.

The following graph illustrates the typical daily consumption of a residential customer for the same time period as shown on the first graph. This typical customer consumes an average of 600 kWh per month.



A comparison of these graphs demonstrates that a typical customer tends to buy more electric energy when the price is high, and conversely, less energy when the price is low.

Since the retailer is buying energy from the pool on an hourly basis[2], and since prices change on an hourly basis, it becomes very important for the retailer to be able to determine how much electric energy each of his customers consumes on an hourly basis. The process of determining the hourly consumption of each customer in Alberta, and providing it to appropriate parties for billing purposes, is known as 'load settlement.' Under the rules of load settlement, local distribution companies have a legislative obligation to break down each customer's monthly energy consumption (which is obtained from actual or estimated meter readings) into hourly consumption. Typical consumption patterns are generally used to allocate monthly consumption over an hourly basis for certain types and classes of customers. After this process is complete, the retailer has all of the data required to send the customer a bill. He knows how much the Power Pool of Alberta is going to charge him for the energy the customer consumed. He knows what the

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2. Under the current load settlement process, all energy consumed in the province is cleared through the Power Pool. Each customer who chooses to perform the retail function themselves, and each retailer who performs the function on behalf of a customer or group of customers is billed by the Power Pool (at the hourly Power Pool price) for all of the energy they consume.

Customers and retailers are able to "hedge" the power pool price. Hedging requires contracts outside the Power Pool process which convert the floating power pool price into a fixed price (often referred to as the strike price). Often referred to as contracts for differences (CFDs), these contracts shift the risk of being exposed to the floating power pool price from the customer/retailer to a third party who is prepared to accept the risk.

While the transaction costs associated with this approach are reasonable for large customers, they are not reasonable (on an individual basis) for small customers. Retailers aggregate large numbers of small customers so that they can spread the transactions costs of hedging over a larger base.

local distribution company has charged him for the distribution service involved in delivering energy to customers. And finally, he knows what rate he is charging the customer for energy.[3] Note that the above procedure does not allow residential customers to manage the time of their consumption in order to reduce the cost of their electricity.

The retailer bills the customer, collects the revenue, and pays the local distribution company for distribution service, and pays the Power Pool of Alberta for the energy purchased on behalf of the customer.

2. What is broken?

It is fair to say that the transition from the utility billing approach to the retailer billing approach has been difficult. One particular area where issues have emerged has been the communication of timely and accurate customer consumption information by distribution companies to retailers or RRO providers. However, there have been other issues as well, as discussed below.

When a customer changes or first selects a retailer, the onus is on the retailer to update the various databases related to that customer, to become the retailer of record. There have been instances where the retailer has not updated the data correctly, which results in the customer receiving his bill from the wrong retailer, or in some instances not receiving a bill at all for some time.

There have been instances where a retailer has properly updated the data necessary to become the retailer of record, but other parts of the process have broken down, and the updated data is not processed properly. Again, the customer can end up receiving his bill from the wrong retailer, or in some instances not receive a bill for some time.

What has further frustrated consumers and caused them to lose confidence in changes to this industry, is in how they have been billed for the energy they have consumed and the tremendous variation they as Alberta residents have experienced across the province.

For example, some customers who should have been billed rate riders have not been, or after paying a rider for a period of time had it mysteriously disappear, only later to have a request for them to make a lump sum payment or an accelerated payment to make up the missed amount.

Still others for the last 2 ½ years have not received a bill for either the wires charges or the energy they have consumed. They have attempted to have the problem corrected by notifying both the wire service provider and the retailer supplying the RRO in that area, only to have them referred back to the other party.

Many customers receive bills from their retailer which include different billing periods for the distribution charges and the energy charges. This leads to customer confusion, since different consumptions are used for calculating the energy component of the bill and the distribution charges on the bill. This confusion was compounded by the addition of a deferral charge associated with the 11cents/kWh cap imposed by the government leading to charges in the current periods for 2001 and 2002 consumption.

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3. The price the retailer charges for electricity may be different from the price he pays to the Power Pool of Alberta for the energy. Retailers who charge fixed rates to customers are subject to the risk that the price of energy from the pool might be higher or lower than the price being charged to the customer. Retailers mitigate this risk by entering into hedges (also known as contracts for differences) with generation suppliers. The process of risk management is beyond the scope of this document.

Some retailers attempted to calculate the distribution charges from the energy consumption information they received about each customer. Unfortunately, distribution charges often vary for reasons other than energy consumed, and this approach did not always result in correct billing for the distribution charges.

In some instances the communication between the local distribution company and the retailer did not properly capture changes in the customer's requirements. For instance, the local distribution company might remove a service when a customer leaves, without notifying the retailer that the customer has left, resulting in the customer continuing to receive bills for a service which no longer exists.

Different local distribution companies read meters on different schedules. If a meter is read monthly, the hourly estimate of consumption is based on actual meter reads, and there is little question about the amount of energy consumed in a month. However, if the meter is read less frequently than monthly, monthly consumption has to be estimated before hourly consumption is estimated, and there can be questions or suspicions about the accuracy of billing information. This type of situation becomes very serious if the customer consumption pattern changes dramatically, since many estimates will likely be performed until the change in consumption pattern begins to be reflected in the estimates of monthly consumption.

There will always be situations where meter reading errors occur, or metering equipment malfunctions. In the overall scheme of things, these types of errors are quite rare, but the fact of the matter is that such problems directly affect an end-use customer. Telling the customer that this type of problem is rare doesn't satisfy a customer who experiences such a problem.

3. Will it work?

Considerable time and effort has been invested to resolve these types of problems in the industry, culminating with the assignment of lead responsibility for load settlement to the Power Pool of Alberta (now known as the Alberta Electric System Operator). Recent changes to standardize the manner in which retailers update databases and mandating increases in the frequency of meter reads are also expected to improve the situation considerably.

The Alberta Electric System Operator is considering introducing a verification delay into customer switches between retailers. If implemented, a retailer to retailer switch would require the new retailer to wait for something like 20 days from the time he signs up a customer until he is allowed to complete the enrollment of the customer. During that 20 day period, the customer's existing retailer would be notified that the customer is intending to switch retailers. If the existing retailer has a contract with the customer which extends beyond the proposed switching date, the existing retailer would be allowed to contact the customer to work out this potential problem.

4. What are the potential traps?

The most significant potential trap is the possibility that the costs associated with this billing approach, particularly the load settlement costs, might grow "out-of-control" in an attempt to introduce unwarranted precision or accuracy to this process. The checks and balances on this possibility are the Alberta Electric System Operator (as the architect of the continuing evolution of the settlement process), and the various regulators of the local distribution companies (in their roles of approving only prudently incurred costs as part of the distribution tariff).

Other potential 'traps' arise from the separate and distinct responsibilities various parties have in providing the information used in preparing customer bills, and the role retailers have as the point of contact for customers. First, while industry has a common and shared interest in ensuring all customers

receive accurate and timely bills, individual parties must only be held accountable for settlement-related responsibilities and matters within their direct control.

The fact that retailers are designated as the key point of contact for customers has been a source of confusion and, in some cases, frustration for customers. Beyond the energy component of the bill, retailers have limited ability or authority to address the various other types of issues that customers had historically been accustomed to dealing with through a single call to the 'utility company.' Despite best efforts to redirect calls to appropriate parties in a timely manner in accordance with the requirements of the regulations, the increased complexity of the process for customers remains a challenge.

As with many of the issues facing the electric industry, the Council believes that customer education on the changes to the industry which affect them has not been adequate. The Council believes that the current approach to meter reading, load settlement, billing, and response to customer inquiries can be successful, if additional effort is made to educate customers, and if all industry participants are held accountable to achieving customer satisfaction in this area. However, if the currently proposed improvements do not significantly reduce customer concern about the accuracy of bills, and the quality of response they receive when they ask questions, further enhancements will have to be considered. The Council notes that Ontario has adopted a billing model where responsibility for customer billing and customer care primarily resides with the local distribution company.

5. Other consumer issues arising.

A major customer irritant appears to be the manner in which customer inquiries or complaints are handled by retailer and local distribution company call centres. Many customers get upset about the length of time it takes to obtain service from a call centre (either because of the waiting time or the number of voice mail options they have to find their way through). Once connected, many customers are not satisfied with the quality of answers or feedback they receive, and are unable to escalate their concerns to the appropriate levels of management of the organization they are calling.

The trade-off of course is cost. Increased customer responsiveness comes with increased costs of operating a call centre.

The issue of customer satisfaction with call centres must acknowledge that call centres routinely receive calls and concerns from customers regarding issues that retailers have no control over or are in no position to resolve. These include concerns over the general level of market prices, and dissatisfaction/disagreement with the concept of deregulation in general. This has two impacts for call centres: first, it diverts operator resources from other customers whose concerns may relate to specific areas of utility responsibility, resulting in an increase in 'waiting time;' secondly, to the extent customers with more general or policy-oriented concerns perceive a utility's response as non-responsive or not helpful, the result would be to skew any customer satisfaction measures.

Appendix C - Issue #3

Fairness of line items on utility bills

Executive summary

Utility bills tend to be the flash point for customer concerns about electricity and deregulation issues. While every effort was made by the government, the regulators, and the retailers to explain the various line items on each bill, the increasing number of line items and the coincidental changes occurring in the industry (separation of the generation, transmission, distribution, and retail markets; the process of auctioning off legacy regulated generating units and returning the proceeds of the auction to customers; the introduction of the Regulated Rate Option; and the introduction of customer choice) has frustrated customers and exacerbated their concerns about electric bills.

The Council has reviewed electric utility bills, and concludes that the line items included on the bills are fair and reasonable, and for the most part, are effectively regulated by the different regulators responsible for electric utilities in Alberta. The exception to this statement has to do with the price of electric energy, which is set by the market. The market for electric energy is monitored by the Market Surveillance Administrator to ensure it operates without manipulation of prices. The Council also notes that recent legislative changes provide for Alberta Energy and Utilities Board regulation of Epcor and Enmax distribution tariffs beginning in 2004.

Recommendations

The Council believes that the onus to demonstrate the fairness of all line items on electric utility bills will continue to rest with the party sending the bill and receiving payments. As more and more customers elect to purchase electric energy from unregulated retailers, this responsibility will rest with the retailers. The Council recommends that:

- Retail marketers continue to demonstrate fairness of bill items,
- Both the government and the industry continue consumer education to explain what the line items are and how they are determined.

1. Background

Consumer prices for electricity are made up a number of different components. These components are influenced by Alberta's deregulated electric industry to varying degrees. Here is a simplified explanation of these components and the factors that influence them.

1.1. Distribution charges

Distribution charges are the cost for wires services providers (WSPs), the distributors in the system, to deliver (or distribute) and meter (or measure) electricity over lower voltage wires from the substation to homes and businesses. The Council notes that all distribution charges are regulated. The revenue requirement making up these charges has been regulated by either municipal governments for municipally-owned utilities or the Alberta Energy and Utilities Board (EUB) for investor-owned utilities. In 2004, the EUB will be responsible for regulating all distributors with the exception of Red Deer, Lethbridge, Rural Electrification Associations and the Association of Municipal Systems. The main factors influencing the distribution charge include: operating and maintenance expenses to ensure system

reliability, depreciation rates, the number of customers using the system, net investment in facilities, volumes delivered and rate of return on capital employed. See also Question #1 for an explanation of the differences in electricity bills across the province.

The Council notes again that distribution charges have not been deregulated and they will continue to be regulated. In the case of investor-owned utilities, the regulator is the Alberta Energy and Utilities Board. In the case of municipally-owned utilities, the regulator is the municipal council. In the case of Rural Electrification Associations (REA), the regulator is the REA Board of Directors.

1.2 Transmission charges

Transmission charges are the cost to transport electricity over high-voltage lines from the point of generation to the distribution system substation. The revenue requirement making up these charges has been determined by the regulator appointed for each utility. Similar to the distribution charge, this revenue requirement will transition to complete EUB oversight in 2006. Factors influencing this charge are the same as the distribution charge, but also include provincial policy on how the system will be built and allocation of future capital investment costs. The recognized need for new transmission facilities and the Government of Alberta's recent decision to build significant new transmission infrastructure likely will cause a modest increase in transmission charges. The objective of this transmission policy is largely to support significant amounts of new, low-cost generation entering the market, providing a net benefit to consumers.

Transmission costs are currently almost entirely regulated by the Alberta Energy and Utilities Board. Recent legislative changes will complete the transfer of regulatory responsibility entirely to the EUB. The Council emphasizes that Transmission costs have not been deregulated and they will remain regulated.

1.3 Local access fee (franchise fees)

Municipal governments charge utilities operating within their boundaries a fee for accessing the rights of way. The methodology to calculate this fee varies widely across the province, as does the amount collected through this fee. The amount of this fee is determined by local municipal councils. These fees existed before deregulation of Alberta's electricity industry and likely will continue to be levied due to their importance as a revenue source for municipalities.

Local municipal councils are accountable to the voters who elect the councils.

1.4 Goods and services tax

A consumer's entire electricity bill is subject to the federal government's goods and services tax of seven per cent. This tax was applied before deregulation of Alberta's electricity industry and will be carried forward in the future.

1.5 Administration charge

The administration charge is a monthly flat charge to recoup a distributor's or retailer's costs for customer service, billing and communication. In some cases, other charges related to management of the energy supply portfolio are also included. Prior to deregulation, these same costs were included in regulated tariffs charged by predecessors to the distributors. With deregulation, because distributors and retailers are responsible for the above services, this charge has been extracted from distributors' regulated distribution tariffs and billed as a separate line item by either the distributors or retailers. Since 2001, the administration charge levied by all retailers has seen downward pressure. This had led to some industry

consolidations for the customer service and billing function, such as ENMAX outsourcing customer service and billing to Accenture Inc. This line item will continue on all customer bills in the future but is subject to intense competitive pressure among retailers.

Administration charges collected by the distributor's are regulated by the distributor's regulator. As discussed above, administration charges collected by retailers are subject to competitive pressures.

1.6 Rate riders

In 2000, regulated utilities in Alberta incurred higher electricity supply costs than they were able to collect from customers. The utilities applied to recover these costs starting in late 2000 or early 2001. The Government of Alberta introduced a regulation preventing utilities from recovering the resultant deferral accounts through consumers' 2001 bills, as would usually be the process. Instead, the legislation allowed utilities to collect this shortfall in 2002, 2003 and 2004. Each utility's deferral amount had to be reviewed and approved by their respective regulatory body and an omnibus hearing was conducted by the EUB for all utilities to ensure the riders were fair. The impact has been customers have had an additional line item, which has collected between $4 and $5 per month (about .6 to .75 cents per kilowatt hour) (depending on the utility) since January 1, 2002. Many customers are confused about this rider. The energy costs that created this rider were incurred in 2000 before the market fully deregulated, due to higher than normal prices. These riders will be removed from consumers' bills by 2005.

Some retailers are collecting another rider associated with the Regulated Rate Option (RRO) price cap in 2001. While the costs being recovered through this rider stem from energy costs after the onset of customer choice, it is due to how the supply arrangements for RRO eligible customers were managed. It is associated with the regulated RRO and is unique to the Alberta deregulated environment. Utilities offering the RRO, and in some instances, customer representatives, were involved in establishing those arrangements and the rider was approved by the EUB.

All of the components listed in 1.1 through 1.6 are impacted minimally by deregulation of the industry and make up about 58% of a typical residential bill.

1.7 Electric energy charge

This line item is the most variable portion of a consumer's bill and is made up of wholesale electricity costs, operating expenses and a margin.

Wholesale electricity costs

Prior to deregulation, utilities charged consumers for electricity but the price of this supply was regulated (cost plus a fair return set the price). In a deregulated market, the market price for electricity is set by supply and demand, and fluctuates more than almost any other commodity. Distributors and retailers are responsible for securing the supply and reselling to consumers through a variety of regulated or competitive rates. Distributors and retailers can secure fixed-price supply through various options or they can purchase supply on the spot market through the Alberta Electric System Operator (AESO).

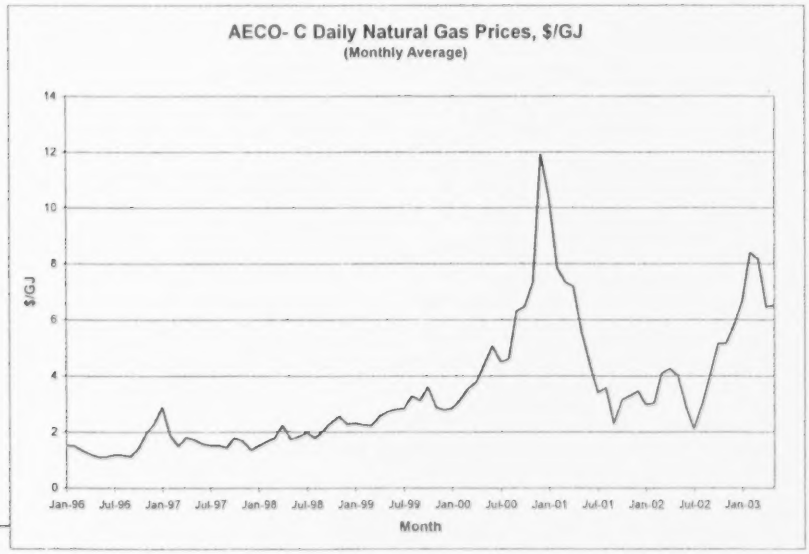
The most important factor is the actual market price of electricity in Alberta as determined by the spot or forward markets. The two primary drivers of market prices are the amount of electricity supply (including imports) relative to consumer demand and the price of natural gas, because typically the gas-fired units set the price in the wholesale market during much of the day. (See Appendix 1 – How the Wholesale Market Price is Determined)

Prior to deregulation of Alberta's electricity industry, in the late 1990s, there was an increasing lack of generation capacity in the province relative to growing customer demand. Immediately prior to deregulation, Alberta's electricity consumers benefited from investments made in generation in the 1970s and 1980s which were considerably depreciated by the 1990s and thus reflected a relatively small asset base relative to the capacity of the generation in this base. Investor willingness to add generation was complicated from 1992 onward by uncertainty about the impending deregulation of the industry. This situation was tempered temporarily in 1999 and early 2000 by imports of hydro electricity at relatively low market prices from British Columbia to supply Alberta demand. As well, natural gas prices were relatively low during this period up to mid 2000. In addition to being short of supply, the cost to generate new supply in Alberta was increasing. Old generation plants which were largely or fully depreciated and at the end of their useful life were replaced with higher cost but more efficient facilities which met more stringent environmental requirements.

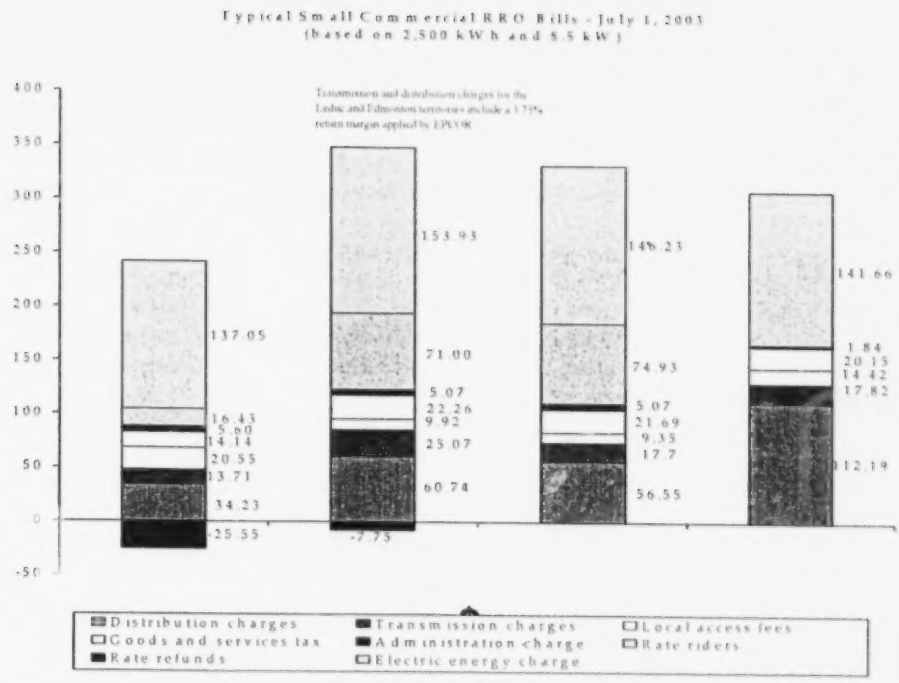
Over the past two and half years, 2,900 megawatts of generation capacity have been added in Alberta. The following chart[4] shows increased availability of electricity supply by a number of measures.

Year	Capacity (MW)	Peak Demand (MW)	Reserve Margin (MW)	% Margin
2000	7,911	7,785	126	1.59%
2003	11,280	8,999	2,281	20.22%

Due to environmental concerns and the investment risk of building more expensive coal-fired generation, most new generation projects were smaller, more efficient units fuelled by natural gas. These are more environmentally friendly, require less capital investment than large coal plants and can be brought online faster. About 41 per cent of Alberta's generated electricity is fuelled by natural gas. Since 2000, with the addition of additional export capacity, the Alberta price of natural gas has become more connected to continental North American prices. In 1999, natural gas prices averaged more than $2 per gigajoule compared to about $5 per gigajoule in 2001.



[4] Note 2003 is estimated. Peak demand in December 2002 was 8,570 MW. Also % margin does not include import/export activity.



There are a number of impacts to consumer prices as a result of this additional supply. The most obvious benefit is the downward pressure created when there is more than adequate supply to meet consumer demand.

A second very important benefit is that the introduction of unregulated generation means the supply is funded and the risk born in most cases by investors, not consumers or Alberta taxpayers.

There is also now incentive for generation owners to increase availability of their plants, particularly at peak operating times. This puts further downward pressure on prices. In the restructured environment, incentives reward generation owners when average maintenance downtimes are less, resulting in higher overall plant availability. In Alberta, consumer demand is being met with more efficient generating facilities, while older and less efficient plants, like CloverBar, remain idle or only operate during peak periods. On the other hand, restructuring of Alberta's electricity industry has resulted in a completely new wholesale pricing model. The new model, where market signals influence price, can have periods of greater volatility. This volatility is driven by many factors, including plant merit order, market structure and less than optimal market conditions in the wake of California and ENRON. Consumers can eliminate their exposure to this volatility by choosing fixed-price competitive contracts.

Another factor that has influenced the energy charge is the WSPs' or retailers' skill in managing the supply portfolio. Some parties have a number of sophisticated methods to ensure attempts are made to secure supply at the lowest possible price. These include securing physical supply, signing financial contracts, participating in export and import markets and conducting real-time trading. Other WSPs or retailers purchase all their energy supply from the wholesale market and flow through the related costs to consumers.

Operating expenses

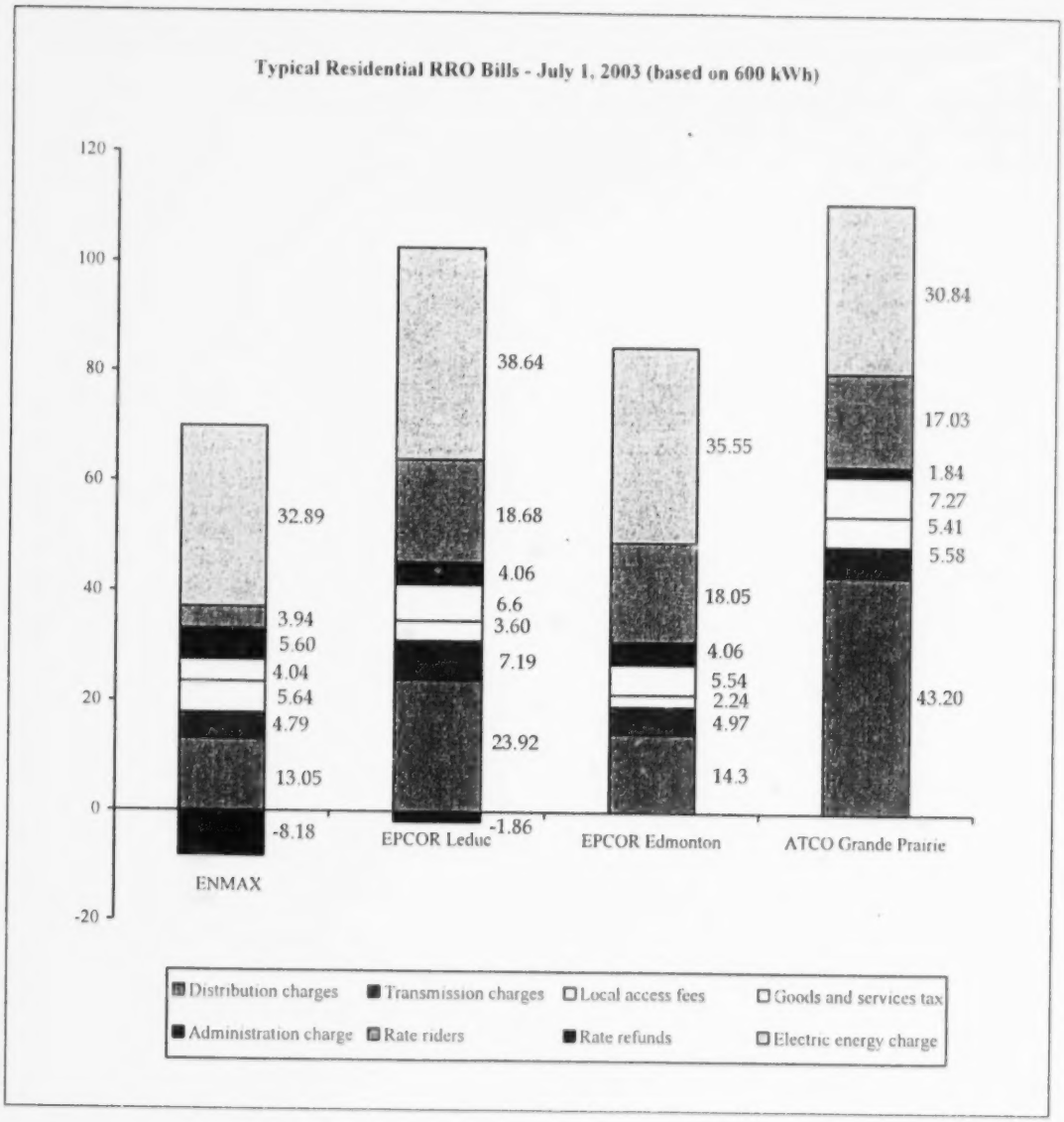
The competitive market puts downward pressure on a retailer's operating expenses. Suppliers seek to lower operating expenses so the per unit costs to serve customers are as low as possible. In order to lower operating expense, suppliers seek economies of scale to reach an optimal scale where operating expenses are as low as possible. Another strategy to lower operating expenses is to bundle multiple offerings such as natural gas, electricity, security system or telecommunications products.

Margin

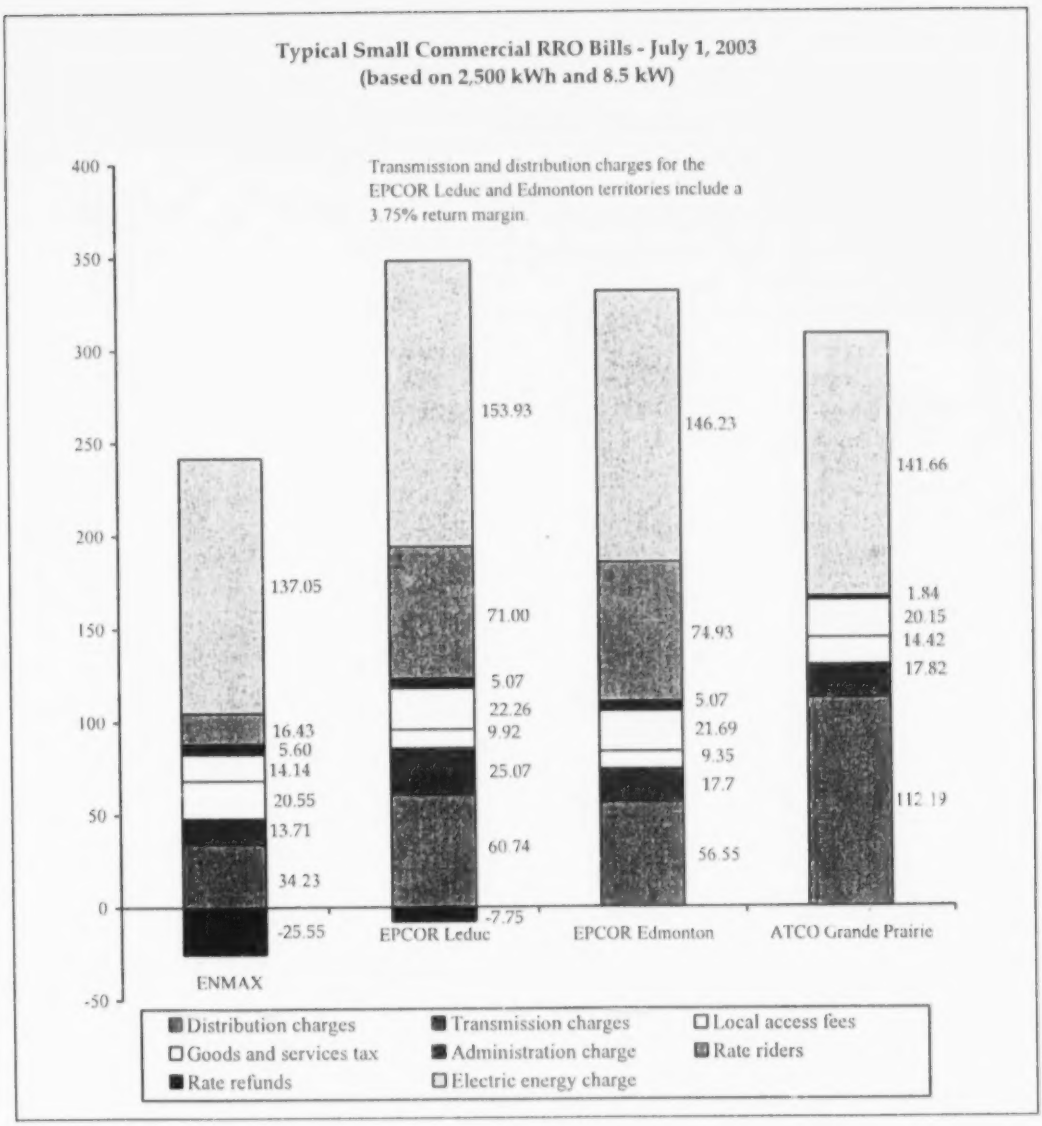
The margin retailers earn on the retail energy charge is influenced by the amount of risk in providing the offering. The greatest risks are related to volume, price and credit. The more risk absorbed by the retailer, the greater the margin sought. When rates are based on flow through prices, the margin is generally less because it is a lower risk offering for the retailers.

Consumers also play a role in deciding what the energy charge is on their bills. They can fix the price over a set period by choosing a competitive offer, sign bundled contracts with natural gas, choose a flow through rate based on spot prices or opt for another form of regulated rate depending on the RRO provider. Large volume customers may use more than one retailer or commit to a contract for only a portion of their total needs. These decisions assume the customer has a good understanding of how prices are impacted and what risk he/she is willing to accept.

All of these components and their influencing factors roll up into typical residential and small commercial bills as seen on the following two pages).


Typical Residential RRO Bills - July 1, 2003 (based on 600 kWh)
120
100
80
60
40
20
0
-20
32.89
3.94
5.60
4.04
5.64
4.79
13.05
-8.18
ENMAX
38.64
18.68
4.06
6.6
3.60
7.19
23.92
-1.86
EPCOR Leduc
35.55
18.05
4.06
5.54
2.24
4.97
14.3
EPCOR Edmonton
30.84
17.03
1.84
7.27
5.41
5.58
43.20
ATCO Grande Prairie
Distribution charges
Transmission charges
Local access fees
Goods and services tax
Administration charge
Rate riders
Rate refunds
Electric energy charge

2.


Typical Small Commercial RRO Bills - July 1, 2003
(based on 2,500 kWh and 8.5 kW)
Transmission and distribution charges for the EPCOR Leduc and Edmonton territories include a 3.75% return margin.
400
350
300
250
200
150
100
50
0
-50
137.05
16.43
5.60
14.14
20.55
13.71
34.23
-25.55
ENMAX
153.93
71.00
5.07
22.26
9.92
25.07
60.74
-7.75
EPCOR Leduc
146.23
74.93
5.07
21.69
9.35
17.7
56.55
EPCOR Edmonton
141.66
1.84
20.15
14.42
17.82
112.19
ATCO Grande Prairie
Distribution charges
Transmission charges
Local access fees
Goods and services tax
Administration charge
Rate riders
Rate refunds
Electric energy charge

2. What is broken?

Consumers believed deregulation of Alberta's electricity industry would lower utility bills below prices in pre-deregulation periods. There are numerous reasons consumers have held to this belief. The Government of Alberta described one of the benefits of deregulation as delivering "prices that would likely be less under deregulation than they would have been otherwise." Consumers misinterpreted this statement to mean prices less than in 1999 to 2000. Some consumer groups believe that if deregulation had not taken place there would have been ample new generation constructed and prices would have remained at or below 1999 – 2000 levels. This belief is not established with certitude on facts because the cost of adding more expensive generation and higher gas prices would have put upward pressure on prices even in a regulated environment. There is no upside to the continued promotion of the myth consumer prices will decline relative to 1999 to 2000 levels in the near term due to deregulation of Alberta's electric industry. One study done to estimate what wholesale prices might have been had deregulation continued was commissioned by IPPSA and completed recently by Tabors Caramanis & Associates, an independent consulting firm. While the Council is not in a position to endorse this study, it notes that the report concludes that Alberta's electricity prices would have risen to meet growing demand even in a regulated environment. It also concludes that Alberta's market prices are converging with rates that would have been seen under regulation.

While well intentioned, the Government of Alberta's 2001 price cap of 11 cents per kilowatt-hour on the RRO distorted market signals. As a result, some WSPs and customers entered into supply arrangements at an inopportune time, costing far more than the average market-clearing price for 2001. The result for WSP customers was a rate rider that will remain on consumer bills until the end of 2003. The Council believes the Government of Alberta must avoid this kind of intervention in the future because the long-term consequences to consumer bills are much greater than the short-term relief.

Alberta's electricity industry is complex and this is apparent on consumer bills. Most consumers do not understand each line item on their bill, let alone the factors causing these line items to go up and down. Some consumers wholly blame deregulation for increasing bills, while only a certain per cent of the bill is directly tied to restructuring and some is attributable to other costs increasing.

3. Will it work?

Both government and industry participants must provide information to improve understanding of prices and the factors influencing them. The Government of Alberta and industry must undertake additional information campaigns. The industry is complex and requires ongoing, multiple hit communications.

It is unrealistic to expect prices will ever be sustainable at levels lower than in 1999 and 2000, due to many factors completely unrelated to deregulation of Alberta's electricity industry. There is some validity to informing consumers of what prices would have been in a regulated model compared to the existing model. This analysis would likely help to dispel some consumer myths around electricity pricing. It is important to note though that there is some degree of imprecision with the comparison. Regulated rates are based on past costs and new regulated investments cause regulated rates to rise. Competitive rates are a product of current and forward looking prices and capacity expansions cause competitive prices to decline as they increase competition and bring more efficient production to market. Even given this anomaly, an independent assessment of consumer prices under both a regulated and deregulated market model would be beneficial.

If success is measured by whether the wholesale power market is working and providing prices lower than what would have been experienced under a regulated environment, there are many positive signals. Alberta's wholesale electricity market has met the primary test in the first few years of operation as

higher prices have attracted new investment that has in turn brought wholesale prices down. This has improved long-term reliability as reserve margins have been restored to acceptable levels and there have been efficiency improvements with new gas-fired generation exhibiting lower heat rates than older units. Wholesale competition has shifted the risks of new investment from captive ratepayers to the shareholders of generation owners and developers, such that there is no prospect of consumers in Alberta, unlike many other jurisdictions, being burdened by stranded costs. While the fundamentals are all positive, the ACE Committee recommends a formal forecast be conducted by an independent party to determine what electricity prices will be in the future.

4. What are the potential traps?

While well intentioned, political intervention via artificial price caps or rebates may appease consumers in the short term, but leads to higher prices in the long-term due to market uncertainty.

Wholesale electricity prices will continue to be subject to volatility. Natural gas prices will play an important role in influencing market prices. As long as the natural gas price stays relatively high, the cost and pricing of electricity also will stay relatively high.

Customers will remain frustrated and suspicious about their electricity bills and other aspects of deregulation until a strong consumer education program helps them understand these matters.

Appendix 1

How the wholesale market price is determined

The Alberta Electric System Operator (AESO) System Coordination Centre (SCC) system controllers dispatch electricity to meet real-time demand, which establishes the hourly real-time market price. The hourly price is published on the AESO's Web site – www.aeso.ca. This is the price used to calculate payments to suppliers and from consumers.

Here's how the wholesale hourly price is established:

1. Power producers and importers submit electricity supply offers. Exporters submit bids to purchase electricity. Consumers submit demand bids to purchase electricity at or below a specific price. These consumer bids are submissions not to purchase if the electricity price reaches a specific point.

2. AESO schedulers sort the supply offers and demand bids from the lowest price to the highest price for each hour of the day. This list is called a merit order for dispatching electricity in the market.

3. As electricity demand shifts throughout the day, the AESO system controllers keep supply and demand in balance by dispatching the next offers or bids in the merit order to ensure the reliability of the overall Alberta power system. System controllers could dispatch 'up' the merit order, calling on the next supply offer or demand bid. Alternatively, they could dispatch 'down' the merit order to reduce supply or increase demand when required to keep demand and supply in balance. Because offers and bids are ranked from lowest to highest price in the merit order, system controllers dispatching up and down the list ensure that Alberta's overall electricity needs are met by the lowest cost option.

4. Every minute, the last eligible electricity block dispatched by the system controller sets the System Marginal Price (SMP). The SMP is updated in real-time and published on our Web site.

5. At the end of the hour, the time-weighted average of the 60 one-minute SMPs is calculated and published as the market price. Electricity, net of forward contracts registered with the AESO, is financially settled at this real-time market price.

In addition to dispatching supply offers and demand bids from the merit order, the system controller provides specific directives to suppliers and consumers to ensure the reliability and integrity of the interconnected Alberta power system.

The system controller also dispatches units that provide contracted ancillary services. Ancillary services are those needed to support electricity transmission from the generation source to the load while maintaining reliable operation of the transmission system, including acceptable levels of voltage and frequency stability. A specific definition is included in the Electric Utilities Act (EUA) under the reference of system support services. The EUA is available at www.gov.ab.ca/qp or by calling (780) 427-4952 (toll free in Alberta by first calling 310-0000).

The following examples illustrate how the merit order is dispatched and market price is set.

When supply offer 3 is fully dispatched to meet system demand, it would set system marginal price (SMP) at $40. If demand increased by 40 MW, the system controller would move up the merit order and dispatch 40 MW of supply offer 4, which would result in an SMP of $50.

When supply offer 3 is fully dispatched and the SMP is set at $40, a drop in demand of 50 megawatts would be handled by dispatching down the merit order. The system controller would instruct the supplier who submitted supply offer 3 to reduce electricity output by 50 megawatts and the SMP would then be set by the next eligible supply – supply offer 2 at $20.

By default, consumers have a standing bid to purchase electricity regardless of price. However, consumers can also submit a demand bid that specifies a certain price at which they will reduce their electricity use or lower their demand. For example, if supply offer 5 is fully dispatched and demand increases 5 megawatts, the system controller would dispatch demand bid 1. This would set SMP at $150 and the consumer who submitted demand bid 1 would reduce this load by 15 MW.

Appendix D - Issue #4

Consumer accessibility to competitive market options

Executive summary

Consumer accessibility to market options has evolved over time. Since the passage of the first Electric Utilities Act (EUA) in 1995, the number of competitive market options for large commercial and industrial consumers has gradually increased, resulting today in a highly competitive market. The advent of competitive market options for residential and small commercial customers has been slower to develop. For many of these mass market consumers the lack of movement to another retailer or competitive contract has been due many factors. These include: lack of knowledge about retailing utility services; the price advantage of regulated rates because of rebates and taxation differences; the chance the government may intervene in the future with rebates, refunds or re-regulation; and, a limited number of retailers and retail options to choose from. For retail service providers, the development of competitive options for the mass market was slower because both the costs and risks to serve this consumer segment were much higher. As recently as mid 2003, a number of market changes took place which will likely result in a greater amount of competitive market options for consumers. These changes include important amendments to the EUA, the entrance of another retailer for the mass market and greater familiarity of retail options among consumers. Additional competitive market options for consumers will evolve, however there are a number of proactive steps that could assist in this progression.

Recommendations

Recognize significant market refinements, as proclaimed through the amended EUA (and associated regulations) in June 2003, address many of the issues impeding development of competition

1. Urgently commit additional funding to develop additional and ongoing consumer education (see Appendix 1).

2. Standardize and simplify the content and format of competitive contracts for consumers

3. Review lower cost contracting practices, such as internet-based marketing and voice signatures

4. Urgently bolster an independent consumer ombudsman function to assist consumers

5. Investigate mitigation by government to market areas most harmed by market transition to deregulation

6. Review Payment In Lieu Of Income Tax (PILOT) treatment for Regulated Rate tariffs provided by municipally-owned utilities

7. Implement appropriate recommendations remaining from Retail Information Management Committee (RIMC) (see Appendix 2)

8. Encourage retailers to expand offers to include shorter term contract offers and additional switching options, such as a "blend and extend"

1. Background

One of the benefits of a deregulated electricity market is consumer accessibility to competitive market options. To date, this has evolved in three phases: before 2001, from 2001 to early 2003, and mid 2003 onward.

Before 2001

In 1992 - 1993, two steering committees called Section 42 (Deregulation Process) Committee and an End User Choice Steering Committee reviewed the structure of Alberta's electricity market for the benefit of all consumers. Participants included: Alberta Association of Municipal Districts and Counties; Alberta Urban Municipalities Association; Consumers Association of Canada (now Consumers Coalition); The Cities of Red Deer, Lethbridge, Calgary and Medicine Hat; Rural Electrification Associations; and Public Institutional Consumers Association. The amended EUA of 1998 was based on interested parties having full access and input into every phase of the legislation and accompanying regulations. Consequently, for more than 10 years, the government actively consulted with stakeholders about the formation of Alberta's deregulated electricity industry.

From 1995 to January 2001, access to competitive market options was limited to large commercial and industrial power users. These sophisticated customers had the resources, knowledge and systems to enter the market early.

After 1995, power generation constructed in Alberta was not regulated. Over the past five years, the option to invest in unregulated generation capacity has been very popular with large consumers, particularly those with the opportunity to exploit co-generation potential. Independent generators currently produce about 4,000 megawatts[5] of electricity per year, including the supply needs of industrial systems.

Starting in 1997, large power users could become classified as industrial systems. Those choosing this option were permitted to have on-site generators to avoid related transmission charges, making customer generation more economic. Between 1998 and 2000, generation from industrial systems has grown steadily to a current level of about 1,395 megawatts per year.[6]

Another consumer option was direct sales. Starting in 1999, customers could enter into purchase arrangements with an independent generation provider and thereby assist the generator in securing financing for proposed generation projects. Direct sales were not as popular as anticipated because of uncertainty in the market. While to date, only two or three of these arrangements have taken place, direct sales are still an option.

2001 to mid 2003

The period of 2001 to early 2003 can be described as the formative stage of a deregulated retail market. The most important milestone occurred on January 1, 2001, when all electricity consumers in Alberta could choose which retailer provided them with electricity supply. When the market opened, 20 retailers were registered with the Government of Alberta. Of these, two retailers were registered to serve residential and small commercial customers. Residential and small commercial market development was intended to be phased in over 2001 to 2005 by virtue of the Regulated Rate Option (RRO). Most retailers

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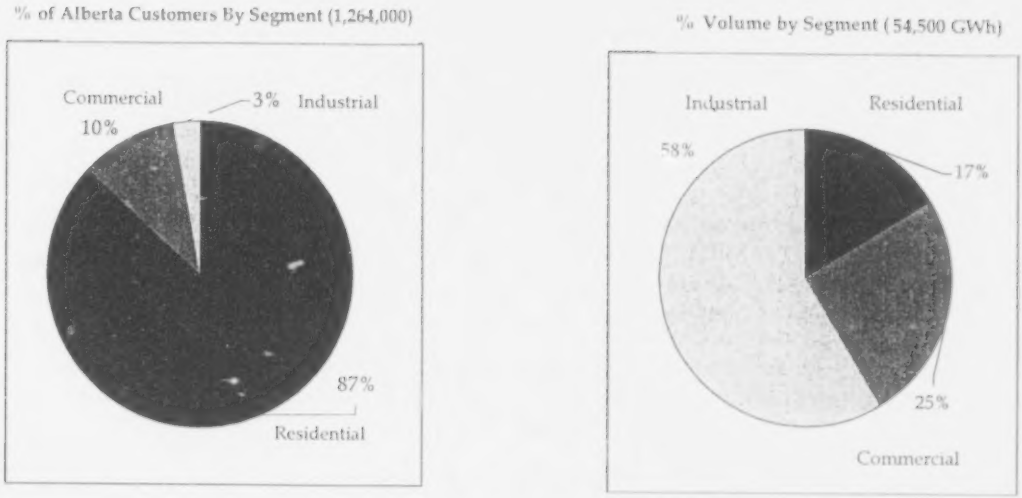
5 Approximately two-thirds of this volume is available to the Alberta grid.

6 This amount is included in the 4,000 megawatts above. Source: Alberta Department of Energy, July 2003

chose to serve the electricity needs of large commercial and industrial consumers. This market is large by total electricity volume, yet small by number of customers served (as seen on following pie charts).



Source: Alberta Energy and Utilities Board, 2001

This trend continued through 2002, when 22 retailers served large volume electricity users and two served the mass market.

Customer accessibility to options extended beyond the list of participating retailers. As of 2001, customers could register with the Power Pool of Alberta and become self-retailers. A self-retailer can make supply arrangements directly with the wholesale market or with a generator. In 2001 and 2002, more than 100 companies chose this option.

The Government of Alberta also established a framework intended to encourage a mix of regulated and non-regulated offerings within the marketplace. The regulated offerings included the RRO provided by the distribution companies. The WSP also provided a Default Supply rate and was / is a Supplier of Last Resort. The retail market is not regulated, therefore evolution of competitive contracts was at the discretion of retailers and customer desires.

Retailers began marketing competitive contracts to customers in the fall of 2000 in preparation for January 1, 2001. The most common offer in all markets is a fixed price for 100% of the energy commodity required by a customer over a set period of time. The fixed price depends on many things, but is primarily driven by the forecasted price of electricity over the contract term at the time the offer is marketed. The length of contracts has ranged from one to five years for residential and small commercial customers. For larger electricity users, the terms have in some cases been shorter, six months for example.

For the mass market, these fixed-price offerings did not attract much attention until 2002. This was due primarily to a 2001 price cap on the RRO and a rebate of funds collected from the Power Purchase Arrangement (PPA) and Market Achievement Plan (MAP) auctions. Smaller consumers also were unfamiliar with the deregulated market and likely lacked the knowledge to feel comfortable switching retailers or signing contracts.

The model of a fixed price over a set term was developed in the natural gas market. Since 2001, some retailers have been actively retailing both commodities. These bundled offers of electricity and natural gas are now available in all market segments. For residential and small commercial customers, retailers have offered incentives to encourage customers to sign contracts. These incentives range from draws for vehicles to a credit on bills for consumption of electricity and natural gas. Another option for consumers is to support green-powered generation through a monthly premium.

There is a clear distinction of how competitive offerings can be marketed and completed with the mass market in comparison with large power users. Because the sales volume per individual customer in the mass market is low, transaction costs to put the customer on a contract must be minimized. Retailers do this by fixing the terms of competitive offers for residential and small commercial customers until the retailer chooses to publish a different offer. Marketing to the mass market is conducted through direct mail, door-to-door campaigns, advertising and partnering store outlets. Depending on the length of the contract, the margin may be different to ensure recovery of initial contracting costs. There are some factors that would reduce contracting costs, such as internet-based contracting, however this option is not yet allowed for in the legislation. As well, contract content and format for these customers are clearly defined by the Government of Alberta. There is a view that contracts are lengthy and remain quite complex. In some instances, mass-market customers have also had to pay exit fees and provide up to 90 days of notice before switching retailers. The issues of exit fees and notice periods have been resolved to some extent by recent regulations.

In contrast, decision making for large power users has been based on face-to-face negotiations with account managers or through highly competitive bid processes. Along with a price for the energy commodity, these customized offers often include a portion of energy coming from wind generated sources, energy consumption audits, community investment contributions and joint marketing efforts.

Overall, the second phase (2001 to mid 2003) has been characterized by a number of competitive market options for the large commercial and industrial market segment. The number and variety of competitive retail options have been more limited for the residential and small commercial market segment. There was little consumer switching among the mass market during this phase.

Mid 2003 onward

The mass retail market had not developed significantly by mid 2003. In June 2003, amendments to the Gas Utilities Act, the EUA and corresponding regulations were proclaimed in force. These amendments are designed to refine the energy marketplace to ensure it develops for the benefit of retailers and all consumers. The changes were a product of widespread consultation with stakeholder representatives and an assessment of the experience gained over the first year and a half of retail competition in electricity and more than four years in natural gas. A number of changes are focused specifically on refinement of the retail gas and electricity markets. These include:

- Starting January 1, 2004, the EUB will assume oversight of distribution and regulated rate tariffs for any municipally-owned utilities with affiliates that operate outside their boundaries, resulting in consistent treatment of all WSPs;

- From 2004 to 2006, the RRO will transition to a flow through Regulated Default Supply (RDS) rate, known as the Regulated Rate Tariff. The flow through option will be introduced in 2004 for small commercial customers and in 2006 for residential and farm customers. This rate will provide these customers with a regulated electric energy charge connected to the wholesale market's spot price;

- There is additional alignment of customer choice for natural gas and electricity. The natural gas retail market structure has been revised to align with that of the existing electric retail market structure. The policy intent was to separate ownership of the wires and the pipelines from ownership of the retail market.

With these changes, Alberta's electric industry entered the third phase of consumer accessibility to competitive market options. A number of key developments to date are beginning to indicate the residential and small commercial market will have access to greater retail choice.

As of June 2003, another retailer is licensed and registered to serve the mass market in Alberta. This new retailer is expected to begin competing for mass-market customers in the fall of 2003. This retailer is offering a number of incentives for customers including an Air Miles program and bundled offers.

Also in June 2003, with the proclamation of the amended EUA, small power users no longer pay an exit fee when changing from a regulated to competitive offer. As well, the notice-to-switch period has been reduced to no more than 30 days.

It is the view of the ACE Committee these changes, in conjunction with a greater understanding of how the market operates, should encourage more interest in competitive contracts among residential, commercial and industrial customers. However a vigorous consumer education program must be put in place early in order to develop that greater understanding.

Aggregate Switching Summary of Alberta's Retail Electricity Market (April 2003)

	% Switched by Sites	% Not Switched by Sites
Default supply*	60.3	39.7
RRO small commercial	24.7	75.3
RRO farm	5.6	94.4
RRO residential	3.0	97.0
Total	6.7	93.3

	% Energy Switched	% Energy Not Switched
Default supply*	90.2	9.8
RRO small commercial	48.9	51.1
RRO farm	14.4	85.6
RRO residential	3.3	96.7
Total	69.9	30.1

Source: Alberta Department of Energy, July 2003

Default supply is a flow through price of wholesale prices for large electricity users who have not signed a competitive contract.

The level of consumer accessibility to competitive market options provided to large power users in the first few years of a deregulated market has begun to mature and focus on smaller Alberta power users.

2. What is broken?

Four factors have led to the belief consumers do not have access to competitive market options.

First, most Albertans are not aware of the high level of retail competition for the province's large commercial and industrial customers. The perception there is little consumer choice is based on the mass market, which is large in number of customers but small relative to total electricity volumes. Likely, this hidden competition has adversely impacted the progress of consumer accessibility to competitive market options to residential and small commercial customers in the early years of deregulation.

Second, many retailers do not find Alberta's electric market for residential and small commercial customers attractive. Costs to serve this market are substantially higher. Retailers need to invest in large-scale billing and customer service operations, however, there is increasing pressure to lower billing charges. They also must budget for greater marketing and advertising costs focused at retaining and attracting mass market customers. Retailers participating in the mass market also must consider the impact of regulated rates. In 2001, the early part of deregulation, significant downward pressure was exerted artificially on regulated rates through price caps and the refund of the proceeds from the PPA and MAP auctions. The residential and small commercial market is the most likely to experience political and regulatory intervention, similar to what has been experienced in Ontario. Overall, some retailers are not convinced profit margins in Alberta's mass market are sufficient to compensate for the costs and risks of serving this market.

Third, residential and small commercial customers have been hesitant to leave their incumbent's regulated offer for either another retailer or a competitive offer. Many factors contribute to this hesitancy.

- While hard to quantify, customer research continues to indicate small power users do not understand the industry or the drivers to electricity prices. There is a general sense of mistrust due to the complexity of the industry and numerous incidents that occurred during the first stage of deregulation.
    - Residential and commercial customers were subject to pricing reflecting hedging decisions by their RRO provider, which were approved by the EUB, but in hindsight proved to be above market. This is not the fault of the RRO provider, but is a function of the uncertainty of markets. Nonetheless, consumers have been disappointed by the results and are unable to understand why a decline in wholesale market prices does not translate into a decline in their electricity supply costs.
    - Regulated and non-energy costs also rose during this period.
    - Billing problems produced an enormous level of negative publicity, primarily in rural areas. The RIMC developed a list of 23 recommendations, but the process has since been stalled, jeopardizing a number of beneficial recommendations. A list of these recommendations is found in Appendix 2.

All together, these incidents fueled consumer mistrust in the integrity of the restructuring effort and marketing chain. One bad news story about any one retailer likely turns off customers desire to do business with any retailer. There is a general lack of information and no neutral body to help consumers in the transitioning market.

- As well, existing provincial regulation on how contracts must be presented and what content must be contained in the contract has led to long, uninviting and hard-to-understand contracts. Contracts and

practices should be standardized. Contract terms necessary in the early years of the markets development may be removed as informed and knowledgeable customers can police the market place.

- Until recently, retailers were only offering three-year and five-year contract terms to residential and small commercial customers. There were no fixed-price offers for just one year, and shorter term options remain limited. As well, there are onerous penalties for consumers moving from one competitive offer to another. The introduction of shorter-term contract offers and additional switching options, such as a "blend and extend" formula, would encourage more residential and small commercial customers to sign contracts.

- The existing RRO provided by municipally owned utilities (ENMAX and EPCOR) is not subject to the PILOT regulation, which is a proxy for Canadian and Alberta corporate income tax. Therefore the RRO rates have an advantage over competitive retail offerings that are subject to taxation. In the short-term, while the RRO exists, this tax structure may need to be modified if consumers are going to be encouraged to choose competitive market options.

- In other jurisdictions, such as the United Kingdom, regulators such as the Office of Gas and Electricity Markets (OFGEM) are given the clear mandate to promote choice and value for all natural gas and electricity consumers. This general understanding gives a unified approach to policy making and implementation for the benefit of consumers. It is unclear if the same approach exists among policy makers and implementers in Alberta's electricity industry.

- There is also an underlying notion among the mass market that the Government of Alberta may re-regulate the industry or at the least provide rebates or price caps to regulated rates. Retailers generally consider rebates problematic, however, poorly designed rebate programs are particularly challenging as they diminish consumers' direct participation in pricing and consumption decisions. In summary, rebates dull consumer incentive to make decisions about electricity.

In combination, these factors are not lending to an atmosphere where mass-market customers are quickly moving to competitive offers and alternate retailers.

3. Will it work?

It is working. Consumer accessibility to competitive market options has matured significantly since 1996. The first market to see these benefits was large volume power users in Alberta. The third phase is just beginning to see the development of competitive market options for residential and small commercial customers. Overall, the Government of Alberta, industry at large and consumers need to continue with the market model in place. Straying from the existing market model will only serve to discourage private investment.

All of the issues identified in the previous section have or can be addressed. For example, the RRO design will transition to flow through of the wholesale spot market price. As a result, the issue of the appropriateness of RRO provider hedges will not resurface in the future. Similarly, the amended EUA addresses many issues impeding development of competition. Some proactive steps this ACE Committee recommends include:

- Standardize and simplify the content and format of competitive contracts for consumers

- Review lower cost contracting practices, such as internet-based marketing and voice signatures

- Urgently bolster an independent consumer ombudsman function to assist consumers

- Commit additional funding to develop additional and ongoing consumer education (see Appendix 1)
- Investigate mitigation by government to market areas most harmed by market transition to deregulation.
- Review Payment In Lieu Of Income Tax (PILOT) treatment for Regulated Rate tariffs provided by municipally-owned utilities
- Implement appropriate recommendations remaining from Retail Information Management Committee (RIMC) (see Appendix 2)
- Encourage retailers to expand offers to include shorter term contract offers and additional switching options, such as a "blend and extend"

4. What are the potential traps?

Although well intentioned, government interference in the competitive market is the primary trap leading to a reduction in the amount of competitive offers available to consumers. This is not to say well considered refinements to the market structure, which are a product of deliberate and well considered analysis and stakeholder input, are not necessary and welcome. However, retailers will not participate in the market unless there is a level of certainty. Neither will retailers invest time and resources into developing innovative competitive offerings if there is a sense price caps and rebates are going to be introduced to confuse competitive market signals. There is evidence to support the conclusion the competitive market can better manage commodity price volatility and supply/demand tension than regulators or governments. Wholesale prices have declined in Alberta because private investors were willing to build additional generation. In contrast, few investors are willing to build generation in Ontario's electricity market due to the great amount of regulatory uncertainty. Also, as Alberta's retail market has matured more retailers have been willing to participate. The initial period of watching how policy makers would react is potentially over and retailers are just beginning to enter the less lucrative mass market.

5. Other consumer issues arising

Problems in Alberta and other jurisdictions, such as California and Ontario, have also adversely impacted Albertans' comfort with a deregulated electric industry, retailers and competitive offers.

Appendix 1

Excerpts from Improving the Competitiveness of Alberta's Retail Electricity Market by Navigant Consulting, Ltd. Page 76 on Consumer Education Spending

"In most jurisdictions with a competitive retail electricity market, the government and other agencies involved in deregulation spent between $0.50 to $2 per resident each year on consumer education in the period immediately prior to and following the introduction of competition. These consumer education campaigns typically ran for two years, but in some instances they ran for up to five years. California spent $80 million on consumer education, roughly $2 per resident per year. The experience of California suggests that merely spending $2/resident to inform consumers about their new freedom to choose an electric supplier is only one part of an effective electric choice program. In California's case, insufficient shopping credits imperilled customer choice. On the other hand, New Jersey experienced relatively low switching rates in spite of having the highest average shopping credits in the U.S. The low switching rate in New Jersey may be partially due to the relatively low consumer education budget."

"Navigant Consulting believes that Alberta can achieve the campaign objectives through a well-designed and planned consumer education program having an annual budget in the range of $0.50 to $1 per resident per year (subject to spending estimates provided by local communications firms with local market knowledge). The campaign should run for two years, with revisions in the message and medium as required based on feedback from consumers. Although the suggested budget of $0.50 to $1 per resident per year may seem high given the Alberta government's current fiscal situation, it should be considered in light of the total investment that the government and other electricity market participants have expended to get Alberta's electricity market to where it is today. Spending on consumer education could be considered as one of the final cost components in Alberta's electricity market restructuring costs. Also, it is important to recognize that if the government does not take steps to increase consumer understanding, consumers will have to rely on information from utilities and retailers (which are not viewed as impartial third parties by consumers) or will remain relatively uniformed. Greater reliance on either of these options would 1) likely result in lower switching rates and 2) impede any other government efforts to improve the competitiveness of Alberta's retail electricity market (as recommended elsewhere in this report)."

Appendix 2

Excerpts from Final Report by Retail Information Management Committee (November 29, 2002). While some progress has occurred on various initiatives, most remain unaddressed, or rely on less efficient, non-standard practices. For completeness, all recommendations of the RIMC report are provided below.

Recommendations *(page 2 to 4)*

1) *That the Alberta Bill Model be a bill ready model that both supports retailers in billing unbundled bills on a timely and accurate basis and supports customers communications of a commercial nature.*
2) *That retailers receive from wires owners the recommended supporting data and billing determinants to respond to all customers' commercial inquiries.*
3) *That the ADOE constitute a group of retailers and wires owners, at which retailers are the voting members, to enhance the retail rules of the Alberta market.*
4) *That the ADOE provide bridge-funding for the development of additional rules for the Alberta retail electricity market.*
5) *That the ADOE document the committee funding mechanisms in regulation to recover the bridge-funding from an assessment included with the wires owners distribution tariff.*
6) *That retailers continue to be the primary point of contact for customers when dealing with queries of a commercial nature and that wires owners continue to be the point of contact for customers' operational issues.*
7) *That in cases where the customer's commercial inquiry is so unusual that the retailer cannot immediately respond to the customer, the retailer must contact the wires owner for a timely resolution and then contact the customer with the answer to the inquiry.*
8) *That retailers and wires owners establish and identify within each entity personnel whose responsibility is to serve as prime contact points for the resolution of:*
   a) *customer issues of a billing or commercial nature,*
   b) *business process issues related to customer billing,*
   c) *service level agreement issues related to customer billing, and who will report initially to the ADOE.*
9) *That the SSC, section 2.4, be clarified with respect to other regulations and the responsibility for responding to customer communications regarding energization and de-energization requests by defining when energization and de-energization is an operational event or a commercial event.*
10) *That retailers provide a mechanism through the customer billing process for wires owners to transmit communications to the wires owners' customers being serviced by the retailer, where retailers recover the cost of providing the service and approve the communications distributed through their processes.*
11) *That rules be created for the retail market requiring wires owners to provide the additional data elements required by retailers:*
   a) *so customers will be able to reconcile the regulated and non-regulated bill line items, i.e. the energy charge, distribution and transmission charges, access fees, etc. which will be linked to consumption shown on the bill and the consumption will be linked to actual meter reads, and*
   b) *to enable retailers to explain bills to customers.*
12) *That all wires owners use the defined standard transaction set and processes to transmit tariff based retail bill data to retailers.*
13) *That:*
   a) *Monthly, wires owners either receive an actual meter reading and determine a customer's consumption based on that reading, or if an actual reading is not available, create and estimated consumption for that customer.*

b) *Wires owners will calculate the regulated charges for the monthly cycle based on either the actual or estimated consumption of energy.*

c) *Daily, and within five business days of receiving or deducing the meter reading, non-REA wires owners will send data to retailers providing the consumption, the D&T and other regulated charges; REA wires owners will send the equivalent data within ten business days.*

d) *All of the retailer's sites within the wires owner's service territory must be included on a monthly basis, so that, over the 20 business days in a month, the retailer receives a tariff charge once for every customers, unless negotiated otherwise by the wires owner and retailer because the particular customer class is not billed on a monthly basis.*

14) *That a successor committee to The Committee be formed immediately with the mandate to develop detail requirements supporting wires owners and retailers as noted above.*

15) *That the Alberta Power Pool Council revise the Alberta Settlement System Code permitting the Site-ID Catalogue to include the Meter Type and the Tariff Rate by the end of the second quarter of 2003.*

16) *That the Site-ID Catalogue be updated daily with the information current as at the day before.*

17) *That the Alberta market move to a single site Site-ID Catalogue administered by one central, independent authority.*

18) *That the ADOE communicate to the different regulatory bodies within the province the need to provide electricity retailers with sufficient notice of new or revised tariffs so affected systems can be changed and adequately tested prior to issuing bills to customers using the new rates.*

19) *To the Alberta Department of Municipal Affairs the need to provide electricity retailers and wires owners with sufficient notice (90 days) of new or revised local access fees so affected systems can be changed and adequately tested prior to issuing bills to customers using the new rates.*

20) *That the ADOE include within regulations the requirement for wires owners and retailers to establish a communications channel to communicate;*

a) *pending and actual distribution and transmission tariff changes, and*

b) *pending and actual local access fee changes.*

21) *That the ADOE initiate a process to investigate with retailers and wires owners a solution to the customer in-contract switching issue.*

22) *That the meter read cycle be included on an exception basis, i.e. when there is a change, with the data in the standardized billing file sent by wires owners to the retailers.*

23) *That the ADOE implement incentives for wires owners and retailers concurrent with penalties, and that both be based on well-defined standards of performance for compliance with the retail rules.*

Appendix E - Issue #5

Long range forecast for consumer prices

The Council decided that it could not provide a useful forecast of consumer prices in the time available for this report. Forecasting prices is a difficult art, especially so when the product is changing from a regulated basis to a market basis for determining prices. Electricity prices are quite variable everywhere for several reasons. For example, natural gas used for generating a considerable amount of electricity has become quite variable, new environmental measures are being applied to the industry, and considerable investment is required across the industry to add needed new capacity and to update existing facilities. In these circumstances the Council decided there was not time to undertake the lengthy study that would be required to properly account for all the variables and new factors facing the industry.

The Council acknowledges that a price forecast done properly with adequate time for completion would be a useful undertaking as a learning exercise. The learning would be in the increased understanding of all the factors, old and new, that influence price in this changing industry.

To comment specifically on the Alberta electricity pricing situation, most Albertans expected deregulation of the electricity industry would lower utility bills below regulated rates in place in 1999 to 2000. In retrospect, this was unrealistic because old generation facilities had to be replaced, there was a lack of supply relative to demand, natural gas prices were rising and there was less hydropower available for import purposes. The introduction of these cost factors plus the application of rate riders, has meant that electricity bills have increased, leading to considerable consumer dissatisfaction and distrust of the market model.

However there are many indicators the energy commodity is experiencing downward pressure as influenced by the addition of a significant amount of supply and competitive pressure on operating expenses. Bills that include rate riders will soon lose those riders so those bills should decrease, provided that the decrease is not offset by other cost increases such as the price of natural gas. In any event, a lack of empirical and comparative data, as well as limited consumer understanding of the factors influencing bills, continues to create significant frustration aimed at the Government of Alberta and industry participants.

Recommendations

Commission an independent study to provide a forecast of consumer electricity prices in Alberta. In view of the changing state of this industry and the difficulty that creates for price forecasting, the recommended price forecast should be done with the scenario methodology or some other form of multiple price forecast methodology.

Appendix F - Issue #6

Current and future benefits of deregulation for consumers

Executive summary

Deregulation of an industry is not an event, it is a complex process that takes considerable time. It therefore takes time for the benefits of deregulated market to be felt directly by all consumers. To date, there have been many positive contributors that will become increasingly apparent to consumers. The wholesale power market is the most obvious example. Investor-owned companies and Epcor have added nearly 3,000 megawatts of more new, efficient electricity supply to the province. Along with increased capacity, the wholesale market is becoming more competitive and responsive. Although many factors will continue to influence prices, this new supply is expected to put downward pressure on wholesale costs in the market. This should be passed on to consumers through lower energy charges. The competitive market is also forcing retailers to put downward pressure on unregulated portions of the bill such as the billing and administration charge. Retail competition is well developed in the large commercial and industrial market and beginning to become active for the mass market. Statistics prove consumers in all markets are increasingly exercising their right to choose a retailer and competitive contract offer, though to date the mass market has developed more slowly. As riders disappear, the market stabilizes, utilities remedy billing issues and consumer understanding increases, what some see as the benefits of deregulated model will become more evident to consumers.

Recommendations

- Recognize significant market refinements, as proclaimed through the amended Electric Utilities Act (EUA) (and associated regulations) in June 2003, does address many of the issues impeding development of competition
- Urgently commit additional funding to develop additional and ongoing consumer education
- Standardize and simplify the content and format of competitive contracts for consumers
- Review lower cost contracting practices, such as internet-based marketing and voice signatures
- Urgently bolster an independent consumer ombudsman function to assist consumers
- Investigate mitigation by government to market areas most harmed by market transition to deregulation
- Review Payment In Lieu Of Income Tax (PILOT) treatment for Regulated Rate tariffs provided by municipally-owned utilities
- Implement appropriate recommendations remaining from Retail Information Management Committee (RIMC)
- Encourage retailers to expand offers to include shorter term contract offers and additional switching options, such as a "blend and extend"
- Commission an independent study of the Alberta wholesale market to assess what costs and impacts would have been experienced by consumers if regulation had continued beyond 2000. The Council

notes that one such study has been recently released by the Independent Power Producers Society of Alberta (IPPSA), which may be sufficient

- Conduct a study of how interconnected electricity markets would impact consumer prices.

1. Background

Electricity consumers in Alberta generally want bills to be as low as possible, reliable power quality, friendly and efficient customer service and accurate, fair bills. Prior to the introduction of consumer choice in 2001, the Government of Alberta promised consumers restructuring would create prices lower than would have occurred through a regulated model, and more competitive options. Consumers heard the promise of lower prices as an overall decline in bills from the regulated market. As well, consumers were unaware that from 1998 through to 2000 the regulated market was deteriorating as a result of a tight supply/demand balance and there was a high risk of generation outages. Even though there was a tight supply situation in the years leading up to 2001, customers were still experiencing reliable electricity service.

It is now two and half years into Alberta's fully restructured market. The results have been as follows:

- New supply was required in Alberta prior to deregulation. Mostly investor-owned companies have added nearly 3,000 megawatts of more efficient electricity supply in Alberta. The impact of this new efficient generation displacing older less efficient sources has an enormous significant beneficial on the environment[7].

- Retail competition in the large commercial and industrial market is fierce. Competition among retailers and provision of more options has been slower to evolve in the mass market due to a number of factors (see question #4).

- Mass market consumer bills have risen. Some increase in wholesale market prices would have occurred with or without changes to the market model. As well, not all of these increases are related to deregulation, but this point is moot with frustrated consumers. They are angry because they believed the promise was for bills to go down. Consumers are also distrustful of utilities they believe are price gouging. This perception is based on the fact some incumbent retailers with surplus supply relative to consumer demand benefited in the initial stages of deregulation.

- Consumer frustration has led to an increased level of regulatory and government scrutiny of the existing market model, particularly in the retail sector. The government has responded with significant new powers granted to the MSA, more teeth in the Code of Conduct Regulation, and the new requirement that some operations of ENMAX and EPCOR become regulated by the EUB rather than by their municipal owners.

- A number of billing and load settlement problems arose with the onset of deregulation. Consumers were not pleased with receiving inaccurate bills, primarily pointing the finger at the Government of Alberta for deregulating the industry. In response, the Government of Alberta introduced a penalty system for some retailers not providing accurate bills within a certain period of time.

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6 Assuming 2000 megawatts of new combined cycle generation with a 7 heat rate displaced an equal amount of older gas generation with a heat rate of 13 (i.e., not the least efficient as Rossdale is about 17-18 GJ/MW and older coal plants also have sufficient emissions), this measure would save over 200,000 tons of CO2 annually.

- On rare occasions, such as just prior to the introduction of customer choice in 2001 and in a few cases since, the Government of Alberta introduced regulation and legislation without stakeholder consultation and on very short notice. An example would be the 2001 price cap on regulated rates. This kind of intervention increased uncertainty in the market and in some cases resulted in additional riders for consumers. As well, this action was interpreted by some consumers as evidence the deregulated market was not stable or working well and the government did not have faith in market reforms.

- Restructuring of the industry has introduced some new cost elements to consumers' bills, such as load settlement, billing and customer service expenses. On the other hand, there are new competitive pressures causing industry participants to reduce cost structures or face losing customers to a more efficient competitor.

- Consumer education of how the electricity industry works and the factors impacting electricity bills has been intermittent and varied in intensity among industry participants. Consumer research indicates most mass market customers do not understand the changes in the industry or the line items on their bill. They require more education and guidance.

- In June 2003, amendments to the Gas Utilities Act, the EUA and corresponding regulations were proclaimed in force. These amendments are designed to refine the energy marketplace to ensure it develops for the benefit of retailers and all consumers. The changes were a product of widespread consultation with stakeholder representatives and an assessment of the experience gained over the first year and a half of retail competition in electricity and more than four years in natural gas.

2. What is broken?

Consumer education has been very deficient with the result that consumer expectations have developed in a vacuum and become unrealistic in some respects, leading to frustration and anger. For example, there is an expectation prices should have declined immediately upon deregulation relative to 1999 - 2000 price levels. This is unrealistic given facts such as the supply/demand balance prior to deregulation, price of natural gas, displacement of old generation plants and escalating costs in other regulated portions of the bill. There is, however, no statistical analysis to provide consumers with empirical data on what prices would have been using a regulated model versus a deregulated model, nor a forecast of what consumer prices will be in the future.

Many consumers have not understood changes to the industry, components of their bill nor how to choose a competitive offer. Consumer research continues to indicate more information is required.

The Government of Alberta has not always achieved an accurate and timely disclosure of their market principles and policies. While well intentioned, this "ad hoc" approach has created uncertainty for market participants and consumers.

Thus far, few residential and small commercial customers have moved to competitive offerings. This is because:

- Only two retailers have served the mass market
- Regulated rates have a tax advantage over competitive offerings due to PILOT taxation structure for municipalities

- The content and format of competitive contracts have been long and complex

- Fixed-price contracts are primarily for three- and five-year terms and penalties to switch from one contract to another are stiff, and

- Many consumers mistrust retailers due to profits realized by some in the early stages of deregulation, the addition of riders and inaccurate bills. Many consumers are hoping the Government of Alberta will re-regulate or provide rebates / price caps.

The transition to customer choice in 2001 had a negative impact on some consumers, through no fault of their own. These consumers lacked an understanding of how the transition to a competitive retail market would impact them. There were few, if any, competitive contracts available to them. Their regulated service provider lacked the physical supply to meet their demand and purchased supply at the Market Achievement Plan auction for historically high prices. Although the regulated rate should have provided some stability, the impact of high price paid for power in a tight supply position and the introduction of a rate cap created the need to collect an additional rider.

3. Will it work?

Many parts of the deregulated market model are already working very well and there is much evidence to prove it.

The wholesale power market is the most obvious example. Investors have built new generation to ensure reliability standards meet or exceed national benchmarks. While proposed generation projects are not always built as scheduled, the fact remains considerable supply has been added. More importantly, taxpayers and consumers are no longer burdened with the cost or risk of adding this capacity. The new generation additions displace older less efficient generation and yield significant environmental benefits associated with lower fuel consumption. The added supply is putting downward pressure on average wholesale market prices. Along with increased capacity, the wholesale market is becoming more responsive. Electricity load responds to market demand conditions more readily by shedding load in times of tight supply and higher prices. New arrangements, which take advantage of customer flexibility, have been put in place to enhance Alberta's power exchange capability with other provinces. There are two issues lessening the positive contribution of this added supply and more responsive wholesale market.

- First, there is no empirical data to suggest market prices are lower than would have occurred in a regulated market.

- Second, in many cases, the downward pressure on wholesale prices has been offset by riders (from pre-deregulation times or due to the price cap) and higher natural gas prices. Consumers have not seen the benefit on their utility bills.

To address the confusion in the minds of rate payers, the ACE Committee recommends the government commission an independent study of the Alberta wholesale market to assess what costs and impacts would have been experienced by consumers if regulation had continued beyond 2000. The Council notes that one such study has been recently released by the Independent Power Producers Society of Alberta (IPPSA), which may be sufficient.

In the next few years, the combination of more supply and added transmission infrastructure will lead to Alberta having greater interconnections with other North American electricity jurisdictions. Many parties fear this change from Alberta being an electricity "island" to an interconnected market participant will be detrimental to the province's current ability to set a made-in-Alberta price. It is true that in the case of the natural gas market in Alberta, when export pipeline capacity was installed, natural gas prices in Alberta rose to match with prices in the United States. The question is whether the same phenomenon will occur

with electricity. A few factors provide an indication of what will happen to electricity prices in Alberta given greater interconnection with North American markets.

- First, one has to examine the economics of generating surplus electricity purely for export purposes. When considering the physical properties of electricity and natural gas, it is cheaper to ship natural gas out of Alberta and convert it to electricity nearer to its consumers compared to generating electricity in Alberta and transmitting it long distances. Simply put, the physical costs favor serving Albertans first. This is not to say the price for electricity in Alberta will not be higher because of exports at times. However, the capability to export also comes with the benefits of imports. The benefit of importing electricity is to lower prices and to create greater system reliability for the Alberta market when the supply situation is tight.

- Second, Alberta's "islanded" status has historically contributed to a very high level of price volatility in the spot market. Increasing the number of interconnections and adding supply, even if for import and export purposes, would moderate wholesale price volatility. The Binding Day Ahead Market (BDAM) is another way to reduce wholesale price volatility through the day ahead market. An interconnected market and the BDAM will never completely eradicate volatility. They do, however, provide a moderating force.

- Third, an interconnected market provides more access to more markets, attracting additional investment in supply. This investment benefits Albertans through downward pressure on prices, increased reliability of Alberta's grid and the spin off benefits to the overall economy. Consumer comfort with regard to moving to a more interconnected market would be better addressed by conducting an independent study to assess the benefits and risks.

In the retail market, accessibility to competitive market options exists in the large commercial and industrial market. There are some positive indications this same trend is beginning to occur in the mass market. Statistics prove consumers in all markets are increasingly exercising their right to choose a retailer and competitive contract offer. The benefits of lower wholesale prices are being passed on to consumers through lower energy charges from both WSPs and retailers. The competitive market is also placing downward pressure on other portions of the bill such as the billing and administration charge. There are a number of actions that would increase the likelihood consumers will have additional competitive options in the future. These include:

- Recognize significant market refinements, as proclaimed through the amended EUA (and associated regulations) in June 2003, does address many of the issues impeding development of competition
- Commit additional funding to develop additional and ongoing consumer education
- Standardize and simplify the content and format of competitive contracts for consumers
- Review lower cost contracting practices, such as internet-based marketing and voice signatures
- Urgently bolster an independent consumer ombudsman function to assist consumers
- Investigate mitigation by government to market areas most harmed by market transition to deregulation
- Review PILOT treatment for Regulated Rate tariffs provided by municipally-owned utilities
- Implement appropriate recommendations remaining from RIMC

- Encourage retailers to expand offers to include shorter term contract offers and additional switching options, such as a "blend and extend"

4. What are the potential traps?

The greatest trap in all restructuring jurisdictions is political pressure on the existing government. The Government of Alberta must not lose faith in the competitive market model. This could in turn lead to either returning to a completely re-regulated model or having a partially regulated and deregulated model that creates market uncertainty, inhibiting investment. The Government of Alberta must not be tempted to make short-term adjustments that time and time again, have proven to have greater negative long-term consequences. Market participants need policy certainty to invest in the marketplace.

5. Other consumer issues arising

The electricity market will continue to be volatile. The Government of Alberta, industry and consumers need to accept this volatility and trust in competitive forces to react positively to market signals. Consumers can manage this volatility by entering into fixed-price contracts. There needs to be faith that consumers will act in their own interest without being forced by government.

As well, the industry will continue to be influenced by the commodity pricing cycle. When the supply / demand balance tightens, wholesale prices will rise to a peak point. At a certain price point, the economics will entice investors to add supply by building more generation facilities. The commodity price will subsequently drop as supply is greater than demand.

The provincial election is approaching. This will increase the pressure on government representatives to alter the market model. It is important these representatives and incoming representatives understand the consequence of sudden policy changes on the market.

Appendix G - Issue 7

Impact of government and EUB decisions on consumer pricing

Executive summary

The Council has reviewed the question of the impact of Alberta Government and Alberta Energy and Utilities Board (EUB) decisions in terms of managing existing electric industry issues. Some of the matters identified reside within the ambit of the Government, other issues are found within the auspices of the EUB and the Alberta Electric System Operator (AESO), while other areas must be left to the market for effective resolution.

The Government of Alberta has a critical role to play in terms of ensuring stability of the existing framework in the electric marketplace. The Government's area of concentration should be on the removal of barriers that inhibit a fully developed and effective wholesale and retail electric marketplace. The existing market framework could be improved by the Government's efforts to enhance clarity about the roles and responsibilities and increased independence for the agencies responsible for the operation and oversight of the electric energy market, and for the administration and regulation of the interconnected transmission system.

Recommendations

- The Government should provide greater clarity about the roles and responsibilities and increased independence for the agencies responsible for the operation and oversight of the electric energy market, and for the administration and regulation of the interconnected transmission system in order to eliminate costly overlap and duplication.

- The Council recommends that Government policy should, to the extent possible, be contained in legislation. Regulations should be used to clarify policy and only sparingly to change policy. If and when the Government does use regulations, it should involve stakeholders prior to invoking the regulation.

- The Government of Alberta should, in consultation with industry, develop or cause to be developed, a comprehensive consumer education and communication strategy to help customers understand the marketplace.

- If the Government of Alberta considers that electricity prices become politically unpalatable and that it must take steps to support consumers, that support should be provided using the general revenues of the province (e.g. through methods such as government administered rebates) rather than through other methods that directly impact on the market.

- The Council recommends that agencies such as the EUB, the AESO, and the MSA may be used by the DOE to assist in the development of policy, they should not be used to set government policy.

- In order to streamline its hearing timelines and reduce regulatory costs, the EUB should develop an enhanced process for gathering customer input into rates. The EUB should also establish performance measures with the objective of improving the timelines for decision-making and create frameworks that reduce the need for costly hearing processes.

- The Council recommends that the Government of Alberta establish a regional process with adjacent provinces and states for the planning of transmission infrastructure and the further development of an integrated North American energy marketplace.

1. Background

The role of The Government of Alberta

The Government of Alberta has a critical role to play in terms of ensuring stability of the existing framework in the electric marketplace. The Government's area of concentration is on the removal of barriers that inhibit a fully developed and effective wholesale and retail electric marketplace. In specific circumstances where retail electricity prices become politically unpalatable, the Government of Alberta may take steps to support consumers, that support should be provided using the general revenues of the province (e.g. such as with rebates) rather than through methods that directly impact the market place. The Government's decision to fund these programs from general revenues would ensure they do not distort the development of the overall marketplace.

The existing market framework could also be improved by the Government's efforts to provide enhanced clarity about the roles and responsibilities and increased independence for the agencies responsible for the operation and oversight of the electric energy market, and for the administration and regulation of the interconnected transmission system. It is anticipated that this refined definition would result in the elimination of any costly overlap and duplication that could exist in separate entities where there are misinterpretations concerning related but distinct accountabilities.

It is the opinion of the Council that policy should, to the extent possible, be contained in the legislation. Regulations should be used to clarify policy and only sparingly to change policy. If and when the Government does use regulations, it is imperative to involve stakeholders prior to invoking the regulation. Further, agencies such as the EUB, the AESO, and the MSA should not be used to set policy.

Since 1995, when electric industry restructuring introduced competition in Alberta's electricity industry, the government has been accused of interfering with the operation of the market. It is unavoidable that decisions made in the interest of the overall marketplace will inevitably be beneficial for some market players and seen as not benefiting the other side of the market transaction. As with all criticism, some of it is warranted, some of it is not.

The following are some examples of government activity that has resulted in criticism from the market.

- Communication and public consultation process of a new transmission policy at the tail end of industry restructuring.
- Regulated Rate Option (RRO) prescribed charges. The issue related to these charges is that consumers did not see or pay for the real cost of power in real time (i.e. while those consumers could have responded). Default Supply Customer Rebates – this initiative was criticized for causing inadequate price signals and rewarded indecision (at least not funded by other participants).
- Import Rule - reflected differences between dispatchable and non-dispatchable supplies.
- Industrial Systems Policy - recognized netting effect of allocated supply and demand.
- Pool Price Deficiency Adjustment (PPDA) - unavoidable result of transition between legislative hedges and market prices.

Lastly, it is imperative that the Government of Alberta, in consultation with industry, develop or cause to be developed a comprehensive consumer education and communication strategy to help customers understand the marketplace. As the campaign helps customers build an enhanced understanding of the market and the value of the choices available to them, customers would also gain the level of trust and confidence necessary for them to participate in the competitive marketplace.

The role of the EUB

Another area of clarity required to enhance overall market stability relates to the role of the EUB. The Government of Alberta must establish clear lines between its policy development and the decision-making role of the EUB. The EUB is a regulatory entity and it is not appropriate for the Board to be involved in defining policy. The process established by Government should provide for a clear and distinct separation between policy debate mechanisms (e.g. Alberta Council on Electricity Issues), development of policy (government), and the implementation of that policy (EUB).

Other recommended areas are intended to strengthen the position of the EUB regarding its accountability as a regulatory entity. The Council has identified key areas for improvement that would result in streamlined hearing timelines and reduced costs. Specifically, an enhanced process for gathering customer input into rates should result in reduced costs and overlap. The EUB could also establish performance measures with the aim to improve the timelines for decision-making and create frameworks that reduce the need for costly hearing processes.

Marketplace evolution

To facilitate timely and orderly market evolution, it is recommended that the Government of Alberta establish a regional process with adjacent provinces and American states for the planning of transmission infrastructure and the further development of an integrated North American energy marketplace.

2. What is working?

Overall, the long-term benefits of electricity market reform as promised by the Alberta government and guided by general policy direction are beginning to emerge. Perhaps one of the most obvious delivered benefits is that generation supply is growing at a rate that is keeping pace with demand and has restored reserves to adequate levels. Investment risk is being transferred to shareholders versus electricity customers.

Response to the price of a commodity is another sign of a successful market. A price that's seen as fair and transparent with minimal market intervention provides the greatest benefit for all market participants, although there will always be price volatility in a commodity such as electricity that can be affected quickly by uncontrollable circumstances like weather; price stability and predictability provides balanced market signals. Increased retail competition is another barometer of an efficient and effective marketplace at work. Finally, customers should begin seeing the related benefits of lower prices on their bills when deferred charges in the form of rate riders begin to disappear at the end of 2003.

3. What is broken?

Government intervention and policy making

An ongoing threat of potential government intervention in the marketplace creates an uncertain framework for investors and other market participants. The rules of the game must be clear and they must

remain unchanged for a specified and reasonable period of time to provide a firm foundation upon which competitive business decisions can be made and implemented. A market that allows unexpected external influences on price signals results in a level of unpredictability that can result in lost investment dollars. The fact that Alberta has undertaken a revision of its transmission policy causes a level of uncertainty. A well-defined transmission policy provides a critical framework upon which the industry can evolve. Clear and stable policy direction on transmission also provides the market with certainty about transmission system reliability and infrastructure planning and operation into the future.

Marketplace

The Alberta market is also affected by market size which is directly related to access to other markets and a lack thereof. It is generally accepted that larger markets result in increased competition to the benefit of consumers. Alberta is somewhat isolated from the larger market in the western interconnection and the committee recommends steps be taken eliminate these constraints. That being said the committee also acknowledges that the cost of increased access may potentially exceed the cost of isolation and is only partially within Alberta's ability to resolve. While we have recently expanded the retail competitors in Alberta, the retail market is too small to attract a large number of competitive retailers. Existing constraints with respect to infrastructure and geographical location results in limited import and export options for wholesale generation.

Further, there is limited ability for load customers in Alberta to adjust their consumption in response to price signals or to receive the benefits of such a response. Price signals are also lost when there is a significant delay between the time of consumption and the time that payment is requested for the electricity consumed.

Education

Public and consumer education is lacking. This has created a level of mistrust and fear that has prevented consumer participation in the marketplace to date. A comprehensive consumer education program would provide critical awareness about the industry in general and specifically create a greater awareness of the pool pricing model and time of use metering.

The EUB

The EUB and other independent agencies such as the AESO should not be used for policy decisions. This activity has resulted in an increase in the cost of hearings – costs which are eventually passed along to customers. The timing for the decision-making process has also become ineffective in some cases (e.g. a recent hearing on a gas Franchise agreement – filed in October, hearing in May and still no decisions.) Another factor affecting the timeline for decisions is that there are too many issues in the decision queue at the EUB. The process of restructuring has created a situation where too many organizations are looking to the EUB for decisions. In some cases, the issue for decision should be directed to the government or resolved in the marketplace and not referred to the EUB.

In addition to the decision-making issues, the drive for transparency is, in some cases, creating confusion with customers and is resulting in increased costs (e.g. rate riders). As well, there is confusion over the role of the EUB. The role of the EUB, as established in legislation, is to make decisions that are in the public interest. The public interest includes customers of electricity, but it also includes the parties that invest in the electricity marketplace and the environment. Additional publicity of the EUB role may help to reduce this confusion.

4. Will it work?

A few fundamental changes are required to help facilitate fertile ground for the continuing evolution of a competitive marketplace for electricity in Alberta. The government and regulators must maintain a long-term approach to policy, while at the same time refraining where possible from short-term decisions that delay reaching the longer term, more lasting benefits of market reform. Competition is working. The industry is maturing. Fundamental issues need to be addressed, questions answered and actions taken to regain customer trust in all aspects of the market.

5. What are the potential traps?

The committee has identified the following three significant traps.

- Short-term, unexpected responses to high consumer prices that mask the longer-term benefits of market reform.
- The potential for susceptibility to lobbying efforts by special interest groups under the guise of "public interest".
- The expectation for the government to react to high prices which, in turn, may negatively impact the development of an effective working market.

6. Other consumer issues arising

There are a few issues on the horizon with respect to building trust with consumers. The industry must strike the right balance between transparency and simplicity for the customer. There is a threat of diminished liquidity. There remains questions about the need for a mandatory binding day-ahead market and the resulting impacts on energy pricing.

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Other consumer issues identified by the Council

The Council has identified other consumer issues related to the previous seven issues discussed. These are noted at the end of the reports on each issue.

Appendix I

Glossary of Terms

Administration Charge
A monthly flat charge levied to recoup a Wire Service Provider's or retailer's costs for customer service, billing, communication and in some cases, other charges related to management of the energy supply portfolio.

AECO (AECO-C)
The natural gas storage and market hub in southeastern Alberta, at which Alberta gas prices are traded and priced.

Alberta Electric System Operator (AESO)
A statutory corporation, governed by an independent Board of Directors appointed by the Alberta Minister of Energy, whose major functions are: to operate the power pool in a manner that promotes the fair, efficient and openly competitive exchange of electric energy in Alberta; to determine the order of dispatch of electric energy and ancillary services in Alberta; to carry out financial settlement for all electric energy exchanged through the power pool at the pool price; to provide system access to the transmission system and to prepare a tariff for transmission services; to manage and recover the costs of transmission line losses and for the provision of ancillary services; to direct the safe, reliable and economic operation of the interconnected electric system; to assess current and future needs of market participants and plan the capability of the transmission system; to make arrangements for expansion and enhancement of the transmission system to meet those needs; and to regulate and administer load settlement.

Ancillary Services
Those services required to ensure that the interconnected electric system is operated in a manner that provides a satisfactory level of service with acceptable levels of voltage and frequency.

Balancing Pool
A statutory corporation, separate from the AESO and governed by an independent Board of Directors appointed by the Alberta Minister of Energy, whose major functions are: to manage in a commercial manner generation assets, which were not sold in the PPA auction of 2000, during the period that it holds those assets; to sell generation assets when it believes that market conditions will provide for a competitive sale of the assets, resulting in the Balancing Pool receiving fair market value for the generation assets; to ensure that any net amount/deficit in the balancing pool is rebated/charged to consumers through the AESO tariff.

Bilateral Transactions (Direct Sales)
A power supply arrangement, the terms of which – including price – are negotiated between an electricity supplier and a consumer.

Binding Day-Ahead Market
A market in which title to the electricity transfers from the seller to the buyer one day prior to physical deliver and the transaction is binding on both parties.

Blend and Extend
The opportunity for customers to reopen an existing contract with a retailer in order to change the terms of the contract over an extended period

Broker
An entity that arranges a market transaction, but does not take title to product

Capacity
The maximum sustainable amount of power that can be carried at any instant; measured in kilowatts (kW) or megawatts (MW). A term that can be applied to an electrical system or to a piece of equipment such as a generating unit.

Code of Conduct Regulation
The Regulation governing the relationship between a wire services provider and its affiliated retailer and the release and exchange of customer information. The Code seeks to ensure that: retailers and customers have equal access to regulated services; wire services providers protect the confidentiality of customer information; retailers have equal access to information disclosed by wire services providers owners; and customers are dealt with fairly by affiliated retailers

Cogeneration
The simultaneous production of thermal (steam) and electric energy; the electricity used for industrial plant use and/or sale and the heat for buildings and industrial processes. Cogeneration is a very efficient means of generating electricity, but its application is limited to situations where there is a requirement for heat (steam load), which usually determines the electrical generating capacity and location of the facility.

Combined Cycle Gas Turbines
Combination of combustion and steam turbines to generate electricity from two thermodynamic cycles; exhaust gases from the combustion turbine are directed to a heat recovery steam generator which produces steam to power a steam turbine.

Congestion
Congestion occurs when the transmission system cannot accommodate all transactions that would normally occur among customers *based on merit order dispatch* due to physical or engineering limitations. The physical limitations are determined by the physical capacities of the transmission components. The engineering limitations are expressed through the application of accepted reliability operating criteria.

Consumer Ombudsman
An independent individual who is able to respond to customers' questions and complaints

Customer
An individual, corporation or other designated entity that purchases electricity for its own use.

Customer Choice
The ability of a customer to choose his/her retailer and to switch from one retailer to another

Deferral Account
A deferral account represents the difference between the actual costs incurred by the utility to provide electricity to its customers and the approved regulated rate paid by consumers during a specified time period. In some cases, the utility may get approval from the appropriate regulator to adjust consumer bills in order to recover from or refund to consumers the balance in the deferral account. An approved deferral account adjustment is commonly called a rate rider. Where warranted, rate riders will appear on future electricity bills in order to balance deferral accounts.

Deregulation
The replacement of regulation by competitive markets

Direct Sales
Bilateral transactions. (Refer above)

Dispatch
A direction from the AESO to a market participant to cause the exchange of electric energy or ancillary services

Distribution (Electric Distribution System)
The wires and other facilities required for the distribution of electricity at a voltage of 25,000 volts or less.

Distributed Generation
A generating unit that is interconnected with an electric distribution system.

EEMA
The Electric Energy Marketing Agency, an agency created by the Alberta government to equalize regulated power prices in the province through a system of cross-subsidies between regulated utilities. While EEMA no longer exists, the need to find a means of terminating it was a driving force in the restructuring of the electricity industry and markets of Alberta.

Electric Energy
The capability of electricity to do work over a period of time, measured in kilowatt-hours (or megawatt-hours)

Electric Utilities Act (EUA), 2003
The Act, passed by the Alberta legislature and given Royal Assent on June 1, 2003, which governs the restructuring of Alberta's electric industry and markets. The Act replaces the Electric Utilities Act of 1995, which was amended substantially in 1998.

Energy and Utilities Board (EUB)
The energy regulatory agency established by the Alberta Energy and Utilities Board Act that regulates those sectors of the electric system, notably including transmission and distribution tariffs, that have not been deregulated.

Exchange
The transfer and return of electricity between utilities at different time periods or seasons to achieve a more economic or efficient system operation

Exit Fee
A fee paid by a consumer when he or she switches from one retailer to another, while under contract to a retailer.

FERC
The Federal Energy Regulatory Commission, the federal energy regulatory agency in the United States.

Flow Through
The act of passing along the costs incurred or commodity prices to a consumer.

Forward Market
A market that determines the price of a commodity in advance of real time delivery for a prescribed time period for a prescribed volume.

Generation
The process by which thermal, mechanical, chemical or nuclear energy is converted into electrical energy, using a fuel source, which may include natural gas, coal, nuclear fuel, wind, water (hydroelectric), biomass (waste products), solar heat.

Gigajoule (GJ)
A measure of heat used for pricing natural gas.

Gigawatt
A measure of capacity equal to one million kilowatts.

Grid
A network of electrical transmission lines and connections.

Heat Rate
A measure of power system efficiency; the amount of natural gas required to generate one megawatt-hour of electric energy.

Hedging
A practice of transacting on a forward market to avoid exposure to the risks of real time price movements.

Incumbent
The existing supplier of a service or holder of an office

Industrial System
The whole or any part of an electric system primarily intended to serve one or more industrial operations of which the system forms a part and designated by the Board as an industrial system

Interconnected System
All transmission facilities and all electric distribution systems in Alberta (or any other jurisdiction or combination of jurisdictions) that are interconnected. But in Alberta the Electric Utilities Act excludes from the definition the service area of the City of Medicine Hat. A system consisting of two or more individual power systems connected together by tie lines.

Interval (Time-of-Use) Meter
A meter that measures at intervals of 60 minutes or less the amount of electricity consumed by a customer

Investor-owned Utility (IOU)
A utility that is structured as a tax-paying business financed through sales of common stock

IPPSA
The Independent Power Producers' Society of Alberta, an association to promote the interests of deregulated generating companies in the province.

Kilowatt (kW)
A measure of electrical capacity and the commercial unit of electrical power; one thousand watts – the flow of electricity required to light 10 100-watt light bulbs

Kilowatt-hour (kWh)
A measure of electrical energy, equivalent to one kilowatt of electric power supplied or produced for one hour.

Load
A point at which electricity is consumed

Load Settlement (Load Settlement Agent)
The process of determining the hourly consumption of electric energy of each customer in Alberta and providing that information to the AESO, retailers, and regulated rate providers in order to identify responsibility for purchases of electric energy exchanged through the Power Pool.

Local Access Fee (Franchise Fee)
A fee paid by utilities to local governments in lieu of access to municipal right-of-way and property taxes on linear property.

Local Distribution Company (LDC)
A regulated Wire Service Provider (WSP) providing distribution services to customers connected to the distribution system.

Margin
Difference between the sale price and the purchase price.

Market Achievement Plan (MAP)
A plan for transferring energy and bidding rights associated with the Power Purchase Arrangements, which were left unsold following the PPA Auction of August 2000, from the Balancing Pool to market participants through the auction of derivative contracts associated with the PPAs.

Market Liquidity
A situation in which there are sufficient numbers of credit-worthy buyers and sellers and therefore sufficient trading volumes to permit discovery of a credible price in the market for a given time period.

Market Signal
Price movements that cause a market participant to respond by taking some action.

Market Surveillance Administrator (MSA)
A statutory corporation established by the Electric Utilities Act, appointed by the Minister of Energy and accountable to the Chair of the Energy and Utilities Board, whose mandate is to carry out surveillance and investigation regarding all aspects of Alberta's electric markets to ensure that the market is functioning in a fair, efficient and openly competitive manner, to investigate, discourage and to recommend penalties in cases of market abuse

Mass Retail Market
The residential and small commercial retail market, comprising consumers with annual consumption at a single site of less than 250 MW.h

Megawatt (MW)
A measure of electrical capacity equal to 1,000 kilowatts; a term generally used to designate the capacity of an electrical generating station.

Megawatt-hour (MWh)
A measure of electrical energy equivalent to one megawatt of electrical power, supplied or produced for one hour.

Merchant Energy Company (Merchant Generator)
A company that builds generation plants on an at-risk basis.

Merit Order
A list of the supply offers and demand bids for each hour of the day, compiled by AESO schedulers.

Metering
The measurement of the amount of electric energy consumed by a customer.

Municipally-owned Utility
A wire service provider or owner of other regulated electric services, that is owned by a municipality.

NEB
National Energy Board, the federal energy regulatory agency in Canada.

Notice Period
The period of time before a customer can switch retailers, after giving notice to his/her former retailer.

Open Access
Fair and equitable access for generators and consumers to the transmission system.

Payment In Lieu of Income Tax (PILOT)
Payments by municipally-owned or other tax-exempt entities which are exempt from federal and provincial income taxes with the objective of creating a level playing field with investor-owned competitors.

Pool Price
The price for each hour, established and reported by the AESO in accordance with the AESO rules, for electricity exchanged through the power pool.

Power Purchase Arrangement (PPA)
A legislated set of terms between the owner of a formerly regulated generating plant and a buyer of the energy and ancillary services derived from the output of that plant.

Postage Stamp Transmission Tolls
Transmission rates are averaged so that customers pay the same transmission rate regardless of their location or distance from generation facilities.

Power Pool
The wholesale spot market operated by the AESO.

Price Cap
A maximum price for electric energy or related services, set by a government or regulatory agency.

Price Volatility
The rate of change of price over time.

Power Marketer
A company that buys and re-sells electric energy.

Rate Rider (Energy Rate Rider)
A charge arising from high energy costs incurred by regulated utilities in 2000 that they were unable to collect from customers. The Government of Alberta introduced a regulation preventing utilities from recovering the resultant deferral accounts through consumers' 2001 bills, but allowed them to collect the shortfall in 2002, 2003 and 2004. Some retailers are collecting another rider associated with the Regulated Rate Option (RRO) price cap in 2001. The costs being recovered through this rate rider stems from how the supply arrangements for RRO customers were managed. All rate riders will terminate by the end of 2004.

REA
Rural Electrification Associations – entities established under the Rural Utilities Act, which supply electricity to their members in rural regions of Alberta.

Regional Transmission Organization (RTO)
An entity created to facilitate the exchange of electricity over large interconnected geographic areas; a concept developed and promoted by the U.S. Federal Energy Regulatory Commission.

Regulation
The determination of rates through a hearing process by a regulatory agency such as the Alberta Energy and Utilities Board.

Regulated Default Supply Regulation
The regulation created under the Electric Utilities Act of 2003 that sets out the terms and conditions for regulated supply of electric energy by a wire service provider to a consumer who has not chosen a retail supplier. This will be a flow-through of the wholesale market.

Regulated Rate Option (RRO)
A retail option that was made available to residential, farm, irrigation and small business consumers, consuming less than 250,000 kW.h of energy annually, which allowed them the opportunity to continue to purchase electricity at a regulated rate during the transition to a competitive electricity small retail market. With the passage of the EUA of 2003, this became known as the Regulated Rate Tariff, which as described below, will become a regulated flow-through of the wholesale market price.

Regulated Rate Tariff (RRT)
The tariff for supply for consumers consuming less than 250,000 kW.h of energy annually who come under the Regulated Default Supply Option under the EUA of 2003. The RRT will become a regulated flow through of the wholesale market price for small commercial consumers who do not choose a competitive retail option on January 1, 2004 and on January 1, 2006 for residential and rural consumers who do not choose a competitive retail option.

Restructuring (Electricity Restructuring)
The process of allowing competitive markets to replace regulation for those parts of the system where competitive markets can function (non-monopoly services)

Retail Access
Ability of retail consumers to access power supply directly from unregulated retailers.

Retail Market
A market for the supply of electricity to end users

Retailer (Retail Electricity Provider)
An entity that supplies electricity and related services to an end-use consumer

Self Generation
Generation of electricity by a customer for its own use

Self Retailer
An entity that makes its own supply arrangements directly with the wholesale market.

Service Area
The area determined under the Hydro and Electric Energy Act in which the owner of an electric distribution system may distribute electricity, or an REA may distribute electricity to its members.

Slamming
A situation where a retailer has updated the data necessary to become the retailer of record without receiving the customer's permission to become that customer's retailer.

Spot Market
The real time market where price is determined upon delivery.

Stranded Cost
The difference between the costs that had been allowed for generation as prudent by a public regulator and the lower rate that the generator can receive for the same generation in a competitive market environment.

Stranded Investment
Utility assets that would lose value in a competitive market

Supplier of Last Resort
Under the EUA of 2003, this term is replaced by the regulated default supplier under the regulated rate tariff.

System Controller
The person within the AESO who is responsible for keeping supply and demand in balance by dispatching the next offers or bids in the merit order to ensure the reliability of the overall Alberta Power System.

System Marginal Price (SMP)
The price of the last block of electricity dispatched to meet the physical requirements of the system (in Alberta, excluding exports and imports). The SMP is updated in real time every minute; the time weighted average of the 60 one-minute SMPs is the market price or pool price for that hour.

Transmission (Transmission Facility)
The wires and other facilities for the transportation of electricity at greater than 25,000 volts and generally over longer distances.

Turbine
A rotary device used to generate electricity; turned by the movement of gases, steam, water or wind.

Unbundled Bill
A bill which provides a breakdown of the various cost elements included in a customer bill, such as generation (energy cost), transmission, distribution and other services and charges.

Utility
A regulated entity participating in the electric power business

Wheeling
The transmission of electric energy generated by one party to another using the transmission system of a third party.

Wholesale Access
Ability of wholesale customers to access power supplies directly from the grid

Wholesale Market
A market in which power is sold to market participants for resale to end users, or to large industrial or commercial consumers.

Wire Service Provider (WSP) (Wire Owner)
The owner of a regulated distribution system – wires and related facilities.